Clinical Lecture
ON
STRANGULATED HERNIA.

Delivered at University College Hospital,

BY CHRISTOPHER HEATH, F.R.C.S.,
HOLME PROFESSOR OF CLINICAL SURGERY IN UNIVERSITY COLLEGE, LONDON.

GENTLEMEN,—Last Sunday week we had a case of strangulated hernia. Unfortunately it occurred at a time when very few of you were here, and the case only lasted a few hours, but I had the opportunity of showing you the post-mortem specimens. The case was this. The man was fifty-six years of age, and he had had a hernia twenty years. On Dec. 6th his bowels acted. On the following day they did not act and the hernia became irreducible. On the 8th vomiting began, and in the evening of that day it began to be stercoraceous. On the 9th he applied to the hospital for relief. So that you see from the 6th, or some time after the 6th, till the 9th, we may say for three days practically, he had strangulated hernia.

The treatment, I am sorry to say, consisted in taking purgative medicines on his own account, and he did not appear to have seen a doctor till he came here. The house-surgeon attempted to reduce the hernia, but failing to do so, he sent for me. I happened to be out of the way, and Mr. Pollard came and acted for me. He operated on the patient and reduced the hernia. At the same time he performed a radical cure by removing the sac, which you see here, and as it turned out to be a congenital hernia with a very much atrophied testicle, he thought it wiser, and I have no doubt he was right, to remove the testicle at the same time. That gave him an opportunity of stitching up the canal and performing a radical cure. But, unfortunately, as soon as the bowel was reduced the purgative which the man had already got in him began to act. He had profuse diarrhœa and considerable exhaustion following upon that, and he died three hours after the operation.

Leaving this case for a moment, let us turn to the subject of strangulated hernia, which is a most important one. In the first place, what do we mean by it? We mean that a piece of bowel has slipped through one of the apertures through which the bowel is apt to pass, and has become so tightly constricted that not merely is it irreducible, but in addition to that the circulation of the bowel is interfered with. It is very important that you should clearly understand the difference between an irreducible hernia and a strangulated hernia. A person may go for many years with irreducible hernia and no harm may come of it; but, if it becomes strangulated, it is obvious that a very few hours will produce such changes in the bowel that, unless it is promptly relieved, the patient will die of mortification of the bowel. I can illustrate pretty well what the condition is in this way. Supposing I tie a piece of string round my finger thus, pretty tightly,—of course I immediately produce venous congestion, because the effect of the string is to stop the return current of blood in the veins. If I go on and keep the string sufficiently tight and sufficiently long upon the finger, I shall eventually get stasis of the blood in the vein, and then stoppage of the blood in the artery, and finally I shall have the finger mortifying and dropping off. That is precisely what occurs with a piece of intestine which is strangulated. If you think for a moment how extremely tight the ring sometimes is, particularly the femoral ring, you will see at once that the strangulation may be very acute; and you may possibly have an opportunity of seeing, as I have seen, a patient in whom strangulation has only lasted a couple of hours or so, looking at the point of death. Now, the explanation of that, I think, is not so much the interference with the circulation (because two hours' strangulation is not sufficient to produce any such change in the bowel as will lead to death); but is the effect produced upon the system through the sympathetic nerve, which, being tightly nipped, reacts upon the patient, who looks as if he were moribund within a couple of hours of the strangulation. There was nothing of that kind here. The patient went three days with his strangulated hernia, and when he was operated on the bowel was not in a very bad condition, because Mr. Pollard thought himself justified—and he was justified by the result—in returning it into the abdomen. Here is a piece of the bowel which was strangulated. You will see from its appearance (of course it has lost its colour) that it has evidently been in a sac more than once. You observe that there is a good deal of thickening about it, and it is obvious that there has been from time to time a good deal of action about the bowel, congestion, and some inflammation which have led to the condition which you see.

With regard to the symptoms, supposing a patient has had hernia for some years, what he generally finds is this. On some occasion, when he has made some extra effort, when he has had, perhaps, a straining at stool, or something of the kind, the hernia comes down and he cannot put it back as he has been accustomed to do. And here let me say that patients are often better able to put a hernia back than the surgeon, however skilful; they have been accustomed to do it, and they have also the advantage of feeling the hernia while they are manipulating it with the finger. They will lie down and put themselves sometimes in very curious positions, and by kneading and carefully manipulating they will put it back. On this occasion the patient finds that with all his efforts and trying all that he knows he cannot put the rupture back, and in such a case, if he were wise, he would take advice at once. But unhappily patients are not always wise, and our unfortunate man, instead of going to a surgeon to overcome the obstruction, took purgative medicine, which was really the cause of his death.

Then in addition to those cases where a patient has had a hernia, you must remember that a hernia may sometimes be brought down and strangulated then and there. A woman may be in a great crowd, sight-seeing—I have known it occur more than once,—and she gets very much squeezed, and afterwards she finds a small lump in the groin, which is then and there strangulated. I remember a case of that kind in 1856 at the Peace illuminations, and the same thing occurred in a patient whom I saw during the last Jubilee year. In such a case the patients are often not aware that there is a lump at all. What they find is that they get sickness, which increases till it becomes stercoraceous, and then perhaps they send for a doctor for what they call bilious vomiting. The same thing occurs in elderly patients, who have felt, perhaps, a little lump in the groin for years and have paid no attention to it until it becomes strangulated. Now, I want particularly to warn you when you get into practice never to treat a case of "bilious vomiting" without being quite certain that it is not a case of strangulated hernia. And do not be content with the word of the patients. They do not always understand what you mean; they may say that they have a lump or they may not; often they will deny that they have a lump because it is so small that they are not aware of its presence. Therefore you ought to make it a rule to put your fingers into the groin and feel the femoral and inguinal regions, particularly the femoral in women and the inguinal in men. And then do not forget the umbilicus, because umbilical hernia is not so uncommon, after all, in women who have had large families, and occasionally you meet with it in men.

In the great majority of cases of strangulated hernia you endeavour if possible to put the bowel back. But if you happen to see a patient who is completely collapsed and faint, with a cold sweat on the skin, and apparently moribund, and a history of three or four days' presence of strangulated hernia, you may be pretty sure that the bowel must have got to a state in which it would be very unsafe to put it back, and you had better operate without applying the taxis. But that is an exceptional thing. I suppose almost every surgeon when he first sees a hernia, makes an attempt to put it back. In applying the taxis you should use steady pressure, but no force. If you use force you may do a great deal of harm to the bowel; you may even tear up the whole sac and push it before you, returning it, as we say, *en bloc* within the abdominal cavity, but not relieving the strangulation. But most particularly you should be careful not to burst the bowel. In such a case as this, for instance, where the strangulation had existed for three days, I can easily imagine that if any undue force had been offered the bowel might have been ruptured.

Failing to return the bowel under ordinary manipulation, what is the next best thing to be done? Undoubtedly,

to operate. Then, should you do anything in the interval, while making preparations to operate? Many surgeons say, "Put on an ice-bag;" but I cannot imagine why an ice-bag should be put upon a strangulated hernia, because it certainly cannot do any good. I know that there are some authorities for it, but I certainly do not recommend the practice to you. I think you had much better not apply ice, because cold may just act as the turning-point in a piece of bowel which is almost gangrenous, but not quite so. The only thing to be done when you have fairly tried the taxis (if you like under chloroform) is to operate, and I want you to understand that the operation for strangulated hernia is not a difficult one. Men have been talked to so much about the anatomy of hernia that they sometimes have an idea that hernia is a mystery which they had better not meddle with; and the result is that surgeons, when young and getting into practice, are a little afraid of strangulated hernia, and a good many lives, I believe, are sacrificed because the surgeon does not at once cut down upon it and treat it as he would any other thing that must be relieved, the operation being one which can readily be done by any qualified surgeon.

I need not say a word about the anatomy of hernia, except to remind you where it comes through. An inguinal hernia comes through the internal abdominal ring into the canal, and out of the external ring. Or, if it is a direct hernia, it will burst through the conjoined tendon, and then come out of the external ring. A femoral hernia would come through the femoral ring, bounded in front by Poupart's ligament, behind by the pubes, internally by Gimbernat's ligament, and externally by the vein, and then would push through the saphenous opening in the fascia

FIG. 1.

lata. That is all the anatomy you want. As to all those minute subdivisions of fascia, particularly the absurd coverings of hernia, they may be forgotten as soon as you like.

Then what is the operation? You have to cut down on to the sac of the hernia, you have to expose the sac, and probably to open it, but not, perhaps, in every case. In an inguinal hernia, such as this was, you want to get down to the external abdominal ring as nearly as you can, therefore you pick up the skin over the ring, making a ridge at right angles to Poupart's ligament, and then transfix it with your knife. The result is that you have an incision about a couple of inches long through the fat just over the external abdominal ring (Fig. 1)[1]. In femoral hernia you make your incision either over the sac, or, as I prefer it, on the inner side of the sac (Fig. 2). A vertical cut in that position takes you down at once to the femoral ring. In either case—this is the point I wish to insist upon—all you have to do is to cut and tear through the tissues until you come upon the sac. In inguinal hernia you will recognise in all probability one tissue, and that is the cremaster muscle, which you divide upon a director, and beneath which, by tearing through a little cellular tissue, you will come upon the sac. In femoral hernia there is no tissue to be recognised, you have merely to cut through the skin and fat, and tear a little cellular tissue with your nail, and you come down upon the sac.

Then, how will you recognise the sac? The sac is a bluish-looking membrane which has no arborescent vessels upon it; for although these are always described, they do not often exist. You will find if you look at the sac that it is transparent, and you can generally see through it the bowel, and often some fluid, and it is not glistening. Remember once for all that the outside of the peritoneum, although it may look a little shining in the wet which is sponged off it, is not glistening in the same sense as the inner surface of the peritoneum. Having cut down upon this blue membrane, which is the great guide, you have only to tear the tissues a little round it, and isolate the sac sufficiently to make sure that you have reached it.

Now comes the question, which used to have more importance than it has now, Will you or will you not open the sac? I am not going to detain you with the controversy which raged a good many years ago as to which was the best practice. For myself, I think it is much better in the majority of cases to open the sac. If you are taking, as you ought to take, every reasonable antiseptic precaution, having your fingers and instruments well dipped in carbolic, and sponging the part with carbolic lotion as you go on, it is much better to open the sac and ascertain thoroughly what the condition of the bowel is. Still, if it is a comparatively recent case you may feel justified in operating outside the sac. In that case you would divide the stricture with a hernia knife, wherever you find it. In the inguinal region you cut upwards, to be parallel to the epigastric artery; in the femoral region you cut inwards, in order to divide Gimbernat's ligament. Supposing that after dividing the stricture as far as you can outside, you still cannot return the bowel, the fact being that the constriction is more or less in the neck of the sac. Then of course it is a case for opening the sac, and that is the critical part of the operation. In the great majority of

FIG. 2.

cases, fortunately for the surgeon, there is a little fluid in the sac; therefore, when he picks up the sac and nicks it against the forceps with his scalpel, the moment he has divided the sac out comes a little fluid, which is a great protection to the bowel within. But every now and then, in quite exceptional cases, there is no fluid, and the sac may possibly be adherent to the bowel within. Under those circumstances it is exceedingly difficult to distinguish and separate the sac from the bowel, and I can conceive that it might be possible to open the bowel inadvertently. Still, with care, I think that should not occur, and practically it does not occur. Then, having made a little nick into the sac, you must open it on a director sufficiently to pass your finger in. It is a very important point not to open the sac too largely; if you do, and if it is a large scrotal hernia, out will come two or three coils of intestine, and there will be a great difficulty in putting them back, and the exposure of the coils, as shown in Fig. 3, will be bad for the patient. You ought not to make a larger opening than you can conveniently plug with your finger. Having got your finger inside, you pass it up to the stricture, and you can either use the nail of your finger, if you have a tolerably long one; or, if you prefer it, you may use a flat director, and slip it along your finger until you guide it beneath the stricture. If it is an inguinal hernia, you will slip your hernia knife along the groove, and just divide it upwards; or if it is a femoral hernia, you will turn the knife sideways. A very little notch is quite sufficient, anything like an incision being quite unnecessary. The result will be that you will be able to return the bowel.

Now comes the question, Shall you in all cases return

[1] Figs. 1 and 2 are taken from Fergusson's Practical Surgery, and Fig. 3 from Liston's Operative Surgery, by permission of Messrs. Churchill.

the bowel as soon as you divide the stricture? In the great majority of cases no doubt you will. In the case before us Mr. Pollard did so, and then he proceeded to perform a radical cure. But there are circumstances which would prevent your returning the bowel. You find, perhaps, when you have opened the sac and exposed the bowel, that it is simply congested. There can be no question about returning that; it is a piece of healthy bowel perfectly glistening and smooth, but congested, and no one can hesitate about returning it. But supposing you have something more than that—that it is not merely congested, but that it is black, and that the surface is not quite smooth,—shall you return it or not? The great majority of surgeons would say that you should put it back, though I believe you may occasionally leave the bowel down to take its chance with advantage. But supposing it to be still worse than that—that it is actually gangrenous, with grey spots upon it, and that there is, what I should lay a great deal of stress upon, a smell of fæcal matter. Then there can be no question about it; you have there a sphacelated bowel which is practically dead, and will give way if you return it. Therefore you ought to lay it open and establish an artificial anus, about which I will say a word presently.

What is the effect if you put the bowel back in a damaged condition? does it do any harm? Well, that is the mischief. There is no peritonitis in the abdomen—Mr. Hutchinson settled that question a good many years ago—so long as the strangulated hernia is outside it. If you have unhappily the opportunity of seeing a patient die with an unrelieved strangulated hernia, you will find in all probability that

FIG. 3.

there is no general peritonitis; there may be acute peritonitis and inflammation, no doubt, in the sac of the hernia; but in the cavity of the abdomen there is none. But if you put back a piece of damaged intestine, and the patient dies in three or four days, as patients are apt to do, with peritonitis, you can have no doubt that putting back the piece of bowel has set up the peritonitis, and therefore I prefer to leave damaged bowel down in the hope that if it recovers it will go up spontaneously, and with the certainty that if it gives way it will do so outside the peritoneal cavity.

Let us take a case where the bowel actually gives way after it has been returned. Is that necessarily fatal? It certainly is if the fæces get extravasated into the cavity of the abdomen; there can then be but one end of the patient; he will have acute peritonitis, lasting forty-eight hours or so, and then die. But, fortunately, every now and then we find that this occurs: you put back a piece of bowel which you are a little doubtful about; you take care to put it simply back and leave it as close to the ring as you can; it forms an adhesion to the margin of the ring, and then it gives way, and the result is that you have fæces coming out of the wound, and two or three days after the operation you have the formation of what is called a fæcal fistula. Now, although that is very alarming to the friends and those who do not understand it, as a matter of fact a fæcal fistula occurring in that way is not very serious, because it generally gets well of itself; the fæces are poured out of the wound for a few days and then gradually diminish and dry up, the wound closes, and the patient is as well as ever.

Many years ago I had the opportunity of seeing a specimen—I think it was brought from the Middlesex Hospital to the Pathological Society—from a patient who had had some years before a fæcal fistula, and then happening to die in the hospital from something unconnected with the hernia, the opportunity was taken to examine the parts. They showed that there were very firm adhesions of the bowel to the margin of the ring, which in the course of years (I think five or six years had elapsed) had become stretched; and so the piece of bowel, although no doubt it was at one time bound down firmly to the femoral ring, had afterwards become loose, and was as freely movable in the abdomen as you would expect a piece of bowel to be. Clearly understand, then, that a fæcal fistula is not a very serious thing. It is nature's way of relieving a piece of damaged bowel. But unfortunately you cannot always count upon its becoming adherent to the margin of the ring before the bowel gives way, and under those circumstances the fæces become extravasated, and generally a fatal result ensues

Then, coming to a further point, suppose that we have a strangulated bowel so completely gone that we see that it is not justifiable to return it. It is offensive to the smell, quite soft, and there may be grey spots about it, and you make an artificial anus. There seems to be a great diversity of opinion as to whether in making an artificial anus you should divide the stricture or not. It seems to me that you must divide the stricture; because, if you do not, I cannot see how the fæces are to pass. You must divide it with as little disturbance as you can of the parts, then lay open the bowel, and leave it alone. Stitching, I believe, is quite unnecessary in an ordinary case. Of course, if there is a large coil of intestine, it may require to be cut away; but these cases generally occur in femoral herniæ, where there is a small knuckle of intestine, and all you have to do is to lay it open, and to allow the fæces to pass.

Now, in these days of advanced abdominal surgery, you may think that it would be possible, after excision of the affected portion, to stitch the bowel together at once, and restore continuity. I should not advise you to try it It is not like a case of wound, where you have a healthy bowel to deal with. You have a more or less inflamed and softened bowel, and if you were to attempt to stitch together the two ends at once you would certainly have the stitches breaking out. Then, again, there is this great difficulty, that the opening through which you would have to draw the bowel is so small that it would be very difficult to manipulate it. And again, the most important point of all is that the condition of the patient is one which forbids any prolonged operation.

If the stricture is relieved, as it ought to be, the fæces will pass out of the upper end, and nothing will find its way into the lower end, and that is a condition from which the patient may well recover. You know that nowadays we do not think so much of having an artificial anus in front; it is the fashionable way of doing inguinal colotomy. But there is this great difference between an accidental artificial anus and colotomy, that it is small intestine with which we are concerned, and you can never tell at what part of the small intestine the accident may occur; consequently you may find that the patient's food will come pouring out of the groin, and the patient will not be nourished. Under those circumstances, of course, it will be a question, supposing that the patient should get over the primary danger of the hernia, of restoring continuity, and it is obvious that what you want to do is to get rid of the *éperon*, or spur, which prevents the fæces from passing along the lower part of the bowel. We do that by putting on a pair of forceps, and nipping the piece of bowel. There is a screw arrangement in what is called Dupuytren's enterotome; but it is nothing more than a large forceps, which you screw upon the spur until it sloughs away, and when it has sloughed away there is of course not much difficulty in doing a plastic operation outside, and so getting a restoration of continuity.

NEW LUNATIC ASYLUM FOR LINCOLNSHIRE.—Colonel Conway Gordon at the next meeting of the County Asylum Board will move, "That in view of the steady increase of lunacy in the county, and the present crowded state of the asylum, negotiations be opened with the Holland County Council, suggesting the desirability of the building by that authority of a lunatic asylum for the accommodation of persons living in Holland."

Lectures

ON

BRONCHITIS; ITS VARIETIES, ITS RELATIONS TO OTHER DISEASES, AND ITS TREATMENT.

Delivered at the City of London Hospital for Diseases of the Chest, Victoria Park,

BY VINCENT D. HARRIS, M.D., F.R.C.P.,
PHYSICIAN TO THE HOSPITAL.

LECTURE II.

GENTLEMEN,—The question as to the relationship between bronchitis and phthisis will always be one most interesting to practical physicians. The relationship, no doubt, is not always the same, but one may put the matter shortly, and say that, speaking generally, when the affections occur together bronchitis is more often than not, at all events, an effect of the presence of tubercle within the lung tissue. Whether, indeed, phthisis is ever an effect of bronchitis is not certain. At any rate, if bronchitis produces phthisis, it produces it only very indirectly. If one takes the view that phthisis is always tubercular, then phthisis must always be caused directly by the specific micro-organism—the tubercle bacillus of Koch,—and cannot be due to anything else. Consequently, bronchitis can never be looked upon as the cause of phthisis. If, however, wasting disease of the lung is not always tubercular, then it is possible, and even probable, that bronchitis may cause phthisis. It may be the first stage of a caseous broncho-pneumonia, on the one hand, which is not at first, at any rate, specific; or, on the other, it may be the beginning of a peri-bronchitis and peri-arteritis, from which results, as was explained in my last lecture, fibroid induration of the lung, or the so-called fibroid phthisis. No pathologist would go so far as to deny that some cases at any rate of fibroid phthisis are non-tubercular. These are questions, however, too pathological for us now. Clinically the problems which concern us are these. When does bronchitis occur in the course of phthisis? When is the diagnosis of phthisis likely to be obscured by the presence of bronchitis?

As regards the first question, bronchitis is often the first effect of the presence of tubercle in the lung tissue. The tubercles are usually first found at the apices of the lungs, and the first signs of a tubercular phthisis are those of bronchial catarrh at one or other apex—the so-called "apex catarrh." There is nothing to indicate that the catarrh is a sign of a specific infection except its localisation to one or other apex. And as regards symptoms, even if a cough more or less troublesome be present, there is seldom any sputum. If there be any sputum, it should be regularly examined for tubercle bacilli. In the absence of proof as to tubercle bacilli in the sputum an absolute diagnosis is at first impossible. It is true that catarrh produced by tubercles, even in a very early stage, causes blood-stained sputa more often than a simple bronchitis of the same severity, and this is an important aid to diagnosis.

When the consolidation of the lung tissue is sufficiently marked to alter the percussion note over the affected area, the diagnosis may be no longer difficult. But remember that the impairment of resonance is not only long delayed for weeks or months, but it may be masked by emphysematous lung in the neighbourhood, and sometimes, according to the very best authorities, is never sufficiently great to be a sure guide. If, with the tubercle at one or both apices, there be general bronchial catarrh, the diagnosis, in the absence of the impaired note over one or more areas, and of tubercle bacilli in the sputum, is exceedingly difficult. Even if the former—i.e., the impaired resonance on percussion—be present without the latter, one cannot come to a definite conclusion without taking into consideration the history, course, and symptoms of the case. The history of marked wasting, night sweats, and hæmoptysis may aid us, but we must remember that all three of these symptoms may be present in simple bronchitis. If we carefully put aside the idea that there is such a thing as a specific catarrh which gives indication of the presence of tubercle by signs of its own, we may obtain a good deal of information from a diagnostic point of view if we remember the following four points:—1. Localised catarrh of the lung is always suspicious, especially if it begin at one apex. 2. A catarrh which persists in one district of the lung for some time, or which slowly spreads from above downwards, is generally a sign of tubercular disease, even if impaired resonance be absent. 3. A catarrh beginning with the smaller tubes, and which is localised, is even more likely to be a sign of tubercle than one beginning in the larger tubes; hence localised, sibilant, or subcrepitant râles are more suspicious than sonorant and crepitant râles. 4. A localised catarrh of the smaller tubes of one apex, combined with rapid wasting and night sweats, irritating cough, even without sputum, are almost certain indications of phthisis of that apex. But even in well-marked consolidation the signs of that condition are often masked by bronchitic râles all over the chest, insomuch that in the absence of actual dulness (resonance is often generally impaired, but may be apparently normal) it is difficult to come to a correct conclusion. This state may occur under two chief circumstances—(1) a case of chronic bronchitis may have phthisis added to it; or (2) a case of chronic phthisis may have bronchitis set up either from spreading of the disease or accidentally, as it were, from cold.

It may be very difficult to say whether a general acute or subacute bronchitis is or is not tubercular under two circumstances. 1. When a person apparently in good health is attacked with cough, dyspnœa, fever, and, possibly, with night sweats of great severity, and with these copious expectoration of considerable viscidity, and some amount of blueness of the lips and tongue. The chest, on examination, gives all the signs of severe bronchitis, sibilant and subcrepitant râles, but no dulness anywhere. The diagnosis in such a case must depend upon the examination of the sputum for tubercle bacilli and upon a frequent examination of the chest for the appearance of impaired resonance in patches. 2. The other condition is when tubercle has been in progress of formation in the lung for some time, and has given rise to little bronchial irritation. On a sudden, as it were, general bronchitis occurs. In such a case there may be on a first examination sufficient dulness to help your diagnosis; but there may not be. In the latter case the examination of the sputum must again be the diagnostic criterion used.

I must allude now to those cases of bronchiectasis which might be mistaken for phthisis, and this will conclude the present section of the subject. Taking the physical signs of a tubercular cavity in the lung, and comparing them with those of a bronchiectasis, we are at once struck with their almost complete identity. To what diagnostic criteria must we look to distinguish the two conditions? In each there may be increased vocal vibration, dulness on percussion, large mucous râles, with bronchial or cavernous breathing and bronchophony, or pectoriloquy. We must rely upon (1) the history in the one case of phthisis, in the other of chronic bronchitis or pleurisy; (2) in the position of the cavity (bronchiectases are likely to occur in positions not usually taken by tubercular vomicæ—e.g., into the base of the lung, and if in the upper lobe, scarcely ever at the extreme apex); (3) in the character of the cough and expectoration, especially in the expectoration of a large quantity of airless, curdy, yellowish-brown, fetid sputum from time to time, from which tubercle bacilli are absent. Finally, Stokes lays much stress on this—that in phthisis we first have dulness and then cavity, while in dilated tubes we have cavity and then dulness.

The bronchial catarrh set up by the pressure of an aneurysm upon the trachea, bronchi, or lung tissue is very curious. It is sometimes accompanied by the expectoration of an enormous quantity of pale, viscid, and very frothy mucus, and is found on examination of the chest to be general, and not local. It often subsides, as it arises, suddenly, and is probably nervous in its origin, at any rate sometimes. Sometimes the sonorous and sibilant sounds with crepitant râles are so marked as to mask altogether the auscultatory signs of an aneurysm within the chest. I have seen several such cases. Quite lately in this hospital I had a patient with a well-marked aneurysm of the aorta who did very well upon Tufnell's diet, but who died in a sudden exacerbation of bronchial catarrh. There was apparently no reason why this condition, which had been well

marked on admission, but had almost disappeared under treatment, should have reappeared. Some interesting and instructive remarks with reference to the bronchial and laryngeal spasm which may accompany thoracic aneurysm will be found in Dr. Gairdner's "Clinical Medicine."

The catarrh of the bronchi which so often accompanies valvular disease of the heart is almost certainly the effect of passive congestion of the lung set up by that condition. It is, as Laennec says, scarcely to be called inflammation. The catarrh is chiefly associated with mitral incompetence, but is also common with mitral stenosis. It is due to the pulmonary congestion, which is always more or less present if the dilatation of the heart is not quite compensated for by hypertrophy. I must omit to dwell upon the bronchitis which is excited by mediastinal tumours. Before turning to the subject of the treatment of bronchitis, I would delay a minute or so to speak of what may be called reflex bronchitis. It is no doubt very familiar to us all that coughs are very frequently reflex in origin, and arise from irritation of the mucous tracts other than the purely respiratory. It is clear also that bronchitis may arise in the same way. This is especially the case with young children, and is associated with the reflex irritation of worms in the intestinal canal or with teething. Stokes mentions several such cases. He adds a very useful remark upon this point—a remark which applies to all forms of bronchial irritation—namely, that the more severe the sympathetic affection be, the less the likelihood of our finding the usual symptoms of the primary affection, and that generally when the sympathetic affections of any local irritation become prominent and severe, the proper or usual symptoms are proportionably diminished or obscured.

We will now turn to the treatment of bronchitis. The subject must be taken in two parts—viz., the treatment of the affection in the acute stage and the treatment of bronchitis when it has become chronic.

An attack of acute bronchitis is often very mild, and the inflammation may not extend beyond the larger tubes. In such a case the affection, although possibly presenting at first somewhat severe dyspnœa and dry hacking cough, disturbing rest at night, may often be cut short or expedited towards recovery by suitable treatment. A bronchitis of this kind often accompanies a nasal catarrh, being one of the most common effects of catching cold. The patient should be confined to his bed in a warm room, the temperature of which should be about 62° F., for a couple of days. Steam from a kettle on the fire should be kept going, in order to moisten the air, a mild purge should be ordered, and a slop diet. If the inhalation of steam by the patient be well borne, I feel certain it will often help the respiration. In place of steam alone, medicated vapours are often used with advantage—e.g., the vapour of benzoin, of conium, and the like. Whether in this stage and in the less severe cases it is advisable to exhibit alcohol, with a view of cutting short the catarrh, is a much disputed question. The common practice among the laity is supported by so great an authority as Laennec, who said in his account of the treatment of bronchitis that the administration of alcohol is unquestionably eminently successful in a vast number of cases. Laennec advised an ounce to an ounce and a half of good brandy to be taken in double the quantity of a simple infusion of violets made very hot and sweetened with syrup of marsh mallows. Many of Laennec's immediate successors objected, chiefly, I think, on theoretical grounds, to the administration of alcohol in any form in acute bronchitis. Dr. Forbes was especially averse to such a proceeding, and Laennec's cousin, Dr. M. Laennec, advised the administration of syrup of poppies in a hot decoction instead, and asserted that it greatly relieved the cough and stuffiness about the chest. I myself am inclined to think that alcoholic stimulants are often of great service even in an early stage of bronchitis. In addition to the treatment above described, which is almost expectant in its simplicity, the administration of eight or ten grains of Dover's powder, which certainly sometimes acts very well in the treatment of nasal catarrhs, is much advocated by some physicians, and saline and diaphoretic draughts.

By closely following out the above method many attacks of bronchitis are cut short, and many others are brought quickly into the condition in which the secretion from the bronchial mucous membrane is free and the expectoration not difficult. In the severer cases of acute bronchitis, especially where the inflammation has extended down to the smallest tubes, which is especially likely to happen in children, we are confronted with a dangerous condition, in which there are not only cough and urgent dyspnœa, but also fever, and a tendency to cardiac failure from the obstruction to the pulmonary circulation. There are often, therefore, marked blueness of the face, lips, and tongue, a temperature of 101° and 102° F., very rapid and often feeble pulse and respiration, often from 50 to 60 in number per minute. The precautions of keeping the patient in bed in a warm room, with the bronchitis kettle constantly in action, are not only to be observed in such a case, but the patient's bed should be brought near the fire, and should be enclosed by a screen; the steam should actually be conducted to the enclosed space, and eucalyptol, oleum pini sylvestris, or similar terebinthinate oil, should be added to the boiling water in the kettle. Instead of this a steam spray of eucalyptus may be kept going near the patient's bed. Counter-irritation is strongly to be advised, rubbing the chest with turpentine liniment, or a mustard-and-linseed jacket poultice may be applied. Some physicians have strongly advised the use of blisters to various parts of the chest when the patient is an adult, but I think there is much to be said against this plan as long as the affection is accompanied by fever. A question of great importance is whether it is advisable to bleed in cases such as I have described. As far as I am personally concerned I have never ordered venesection in acute bronchitis, nor have I seen it done. But the consensus of opinion among authorities both ancient and modern is in favour of this plan in suitable cases. Cullen in the last century urged it, and he is in agreement with Stokes and Greenhow. It is true that Laennec considered that it was contra-indicated, but this arose from the fact, as was pointed out by the translator of his work, Dr. John Forbes, that he did not seem to be aware of the existence of the severer forms of acute bronchitis. The patients who can stand energetic venesection for acute bronchitis are, however, few—the young and lusty, the robust and muscular. It should never be ordered for children or for people past the middle period of life or for the feeble and debilitated.

Again, if the capillary tubes are implicated, even if the fever be not urgent, leeches and cupping are recommended, and especially to the upper parts of the chest, according to Stokes. Sometimes one or other is indicated, but speaking generally, in my opinion energetic counter-irritation is much to be preferred.

Another form of the antiphlogistic treatment is the administration of tartar emetic in large doses. This is strongly insisted upon by many competent authorities both for adults and children. My own experience leads me to think that reasonable doses of tartar emetic are certainly of use in severe bronchitis, and I know from successive resident medical officers at this hospital that their experience agrees with my own.

Stokes was a great believer in the use of tartar emetic in this affection. He gave to an adult no less than from six to eight grains, or even ten grains, in twenty-four hours, and continued the practice in spite of violent vomiting and purging having been induced in many cases. After a time a tolerance of the drug is engendered no doubt, and the patient can take a large amount of the drug without inconvenience. Tartar emetic is said to act in two ways in the alleviation of bronchitis. When it can be tolerated, it either cuts short or nips in the bud the excess of fever and also the local catarrh, or it causes the affection to pass into the next stage, in which there is free secretion, and at the same time moderates the fever. The rules laid down by Stokes for the exhibition of tartar emetic in acute bronchitis are worthy of mention. They are as follows:—The more robust the patient; the more acute the disease; the more bloodletting has been indicated, and has been well borne; the more inflammatory the blood; the earlier the disease has been met by treatment; and, lastly, the more simple and uncomplicated the affection,—the more is tartar emetic indicated. When for some reason it is not considered advisable to give tartar emetic, ipecacuanha—generally as the vinum—may be given with advantage; it acts as a good diaphoretic. Large doses are advocated by the physicians of the last generation—in fact, as large doses as a patient will take without actual vomiting. Laennec believed that vomiting at the onset of a catarrh may be highly beneficial, and especially in the case of children. If in the course of a few days the case takes a favourable turn and the fever subsides, it then becomes necessary to employ stimulants and expectorants, of which the ammonium preparations are to be preferred; carbonate or chloride of

ammonium, or a combination of the two, may be used with advantage. By this time the sputum crudum has probably become sputum coctum, and the expectoration is easy. The after-treatment is that which is usual in chronic bronchitis.

The extreme prevalence of chronic bronchitis in this country, and particularly in London, has naturally been the cause of the introduction of varieties of treatment for the affection, which seem almost endless. The winter cough from which so many of the dwellers in London year by year suffer is generally the most marked symptom of the affection. But there is added considerable shortness of breath and wheezing; with the cough is more or less expectoration. It is not asserted that all winter coughs are bronchitic in their cause, as some are probably due to phthisis and other affections; but the vast majority of winter coughs are due to chronic bronchitis. That is invariably the case in coughs which have recurred for from ten to twenty winters. Patients with winter coughs do not, as a rule, come for medical advice, unless the cough is more than ordinarily troublesome, and the expectoration difficult, or unless the breath is shorter than usual, or unless the legs swell, or some more than usual symptom is superadded.

The cause, then, of these patients seeking advice is usually an exacerbation of the bronchitis with a little fever or a secondary interference with the pulmonary circulation, or the existence of some complication—bronchiectasis, broncho-pneumonia, or the like. It may be said that some bronchitics waste considerably. It must be remembered that the patients who suffer severely from winter cough are generally those whose occupations necessitate exposure to cold and wet, such as watchmen, butchers, fishmongers, washerwomen, charwomen, and the like, and that the majority cannot lie up at home in a warm atmosphere; and means have to be devised whereby their condition may be alleviated in spite of their occupations. In cases, however, with cardiac complications and congestion of the circulation, as indicated by dropsy, cyanosis, and possibly albuminuria, it is quite useless to attempt the treatment of the affection unless the patient is able to lie up at home. The treatment of such cases we will consider presently. When there is no complication, and the patient is able to go about his work wheezing, puffing, and coughing it may be all the time, but being especially worse at night, we have several methods of treatment which under ordinary circumstances afford relief. These are by inhalations, counter-irritation, and the administration internally of various kinds of expectorant medicines. We will consider these methods seriatim.

Inhalations.—Even the inhalation of steam night and morning helps the expectoration; but the addition to the water of compound tincture of benzoin or of creasote, of eucalyptus or carbolic acid in small amounts, considerably adds to the benefit of this method of treatment. If one form seems too irritating, another may be tried. The patient must be induced to give this plan a fair trial, but must be directed not to employ the inhalation too long at one time (faintness may be induced). Under the same head must be classed the sprays of various medicaments recommended by Drs. Ringer and Murrell, and used by them with such success. The drug mostly employed has been ipecacuanha wine, either pure or diluted with once or twice its bulk of water. The plan of treatment is as follows. The simple spray apparatus, such as is used for ether spray, may be used with the diluted ipecacuanha wine, and the patients should be directed to inhale the spray as given off. At first there may be some involuntary resistance to the entrance of the drug into the lungs; but as they gain confidence it no doubt enters freely into the air vesicles. Instead of the ether spray apparatus a steam atomiser may be used. Dr. Murrell claims that with a few sittings, at each of which two drachms or more of ipecacuanha wine are used, the patients are greatly relieved, the shortness of breath and cough are soon better, and good rest at night is obtained. The number of inhalations required in most cases of winter cough ranges from four to eighteen; it should be given daily. The action of ipecacuanha is said to be that it increases the secretion, but in small doses depresses the blood pressure but little, while it stimulates ciliary action and that of the respiratory centres. Tartar emetic sprays (one grain to an ounce of water) or antimonial wine and water (equal parts) has also been used; it produces the same effect as the ipecacuanha wine, but is less satisfactory. Lobelia spray is also sometimes employed, especially when there is much spasm. Iodide of potassium spray (2 per cent. solution) is also of much use, and is, Dr. Murrell believes, one of the ingredients of the patent remedy "spirone," together with glycerine and acetone. A large number of other substances have also been used with more or less success in chronic bronchitis, of which may be mentioned terebene, pinol, and chloride of ammonium.

Counter-irritants seem to be of the greatest use in chronic bronchitis, and I have great faith in the linimentum terebinthinæ aceticum well rubbed into the chest night and morning. Others use linimentum iodi, with the idea that it is not only an active counter-irritant, but that it also does good when inhaled, iodine having been strongly recommended as an inhalation in bronchitis. Emplastrum calefaciens or linimentum cantharidis may also be employed, but it is better to avoid blisters if possible.

As regards *expectorant* and other drugs in the treatment of chronic bronchitis their name is legion. I give the preference to carbonate of ammonium, either five grains of the salt with infusion of senega or serpentaria, or in the form of the aromatic spirit of ammonia, three grains, with ipecacuanha wine and compound tincture of camphor. My own experience of this drug in a large number of bronchitics is highly favourable. Chloride of ammonium is also of much service. I have also a good account to give of the compound tincture of benzoin and balsam of Peru and tolu in suitable cases. On the introduction of pure terebene as a cure for bronchitis some years ago, I made a winter's trial of it among the bronchitic patients at this hospital, with the result that in a minority of patients it produced a better effect than carbonate of ammonium, but that in most cases after a time I was obliged to return to my favourite remedy. My experience, however, was not nearly so much in favour of the drug as the consensus of opinion is said to have been.

As regards the preparations of tar, creasote, and benzol, a most interesting and instructive account of the action of which has been given by Drs. Ringer and Murrell, it may be said that although tar water was first of all introduced by an Englishman, it was taken up as a remedy chiefly by French physicians, and has been almost exclusively used by them until the appearance of the paper on the subject by the before-mentioned authors. Laennec thus alludes to these preparations:—

"The balsams are frequently beneficial when the stomach will bear them, but they must be given in a larger dose than usual. The balsams of tolu and copaiba, as also turpentine, should be given in a dose of from eighteen to thirty-six drops daily, and sometimes in still larger quantity. The internal use of tar water as the ordinary drink has sometimes proved successful, as has also the inhalation of the fumes of this substance, either simply or mixed with water diffused in the patient's chamber." My own experience of the use of tar has been most favourable.

All of the foregoing drugs have much the same action. Two other kinds of drugs must be briefly alluded to—namely, several drugs which are said to increase the activity of the respiratory centre—of these strychnine is the most important. According to some authorities, among whom may be mentioned our late colleague, Dr. Milner Fothergill, strychnine was *the* drug in most cases of chronic bronchitis. I have given it in some cases with distinct advantage. The other class of drugs to which it is necessary to draw attention is the emetic class.

I have no hesitation in saying that emetics are of the greatest service in the treatment of chronic bronchitis with excessive secretion which is not expectorated freely. They are, however, but little used. By their aid the chest is often cleared for a time of the hyper-secretion and respiration is freed from embarrassment. I have a patient who has been attending in my out-patient room for years, who is so benefited by an emetic that she from time to time comes for the purpose of obtaining one. I usually employ the pulvis emeticus of our Pharmacopœia, which consists of nineteen grains of ipecacuanha powder and one grain of tartrate of antimony. In an account given by an eminent authority who urges periodically frequent emetics in the treatment of chronic bronchitis, we find that he treated an old lady of over eighty who had laboured under a chronic catarrh for eighteen months, with an expectoration which amounted to 2 lb. daily. Fifteen emetics were prescribed in one month

with complete success, for the patient lived for eight years afterwards free from the complaint.

Now to turn to the severe cases of chronic bronchitis in which there is some complication such as cyanosis or dropsy. These must be treated in the way laid down for the treatment of the acute disease. Patients must be kept in bed in a warm room and must have the vapour of eucalyptus, terebene, or creasote to breathe. I should also advise alcoholic stimulants, in spite of the prejudice against them, the diffusible stimulants, such as ether and small doses of digitalis, either from seven to ten minims of the tincture or one grain of the powdered leaves in the pill, with calomel and squill. If the cyanosis continues, we must have recourse to bleeding from the arm. I have myself seen great benefit from bleeding in such cases. Its effect is apparently to diminish the pulmonary congestion and to allow a freer action of the heart. In some cases an emetic does good.

In the foregoing remarks upon the treatment of bronchitis I have almost entirely omitted to make any mention about the administration of opium and its preparations. The reason is that it is best, if possible, to avoid the use of opium altogether. In some cases the cough is so troublesome and wearying that relief has to be obtained somehow or other. In such cases it is admissible to give such mild preparations as the compound tincture of camphor and ipecacuanha pill, with squill, which are often very efficacious. In one form of bronchitis morphia is the sheet anchor, and that is the bronchitis dependent upon the pressure of an aneurysm or tumour. A subcutaneous injection of a quarter of a grain of morphia has a wonderful effect in diminishing the distress. In all cases where the difficulty of breathing is especially marked iodide of potassium should be tried.

In conclusion, I should say that chronic bronchitic patients should be treated with tonics as well as expectorants, and that cod-liver oil, iron, maltine, and the syrup of the hypophosphites may all be prescribed with advantage to sufferers from winter cough.

NOTES ON THE FUNCTIONS OF THE NERVOUS SYSTEM.

By W. R. GOWERS, M.D., F.R.S.,

CONSULTING PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL; PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

III.—AUTOMATIC REFLEX COÖRDINATION.

IT is instructive to consider the processes that have been dealt with in the previous notes in their bearing on muscular action. The elements of this can be thus discerned more clearly, and we are able to perceive more of their influence and their importance. Indeed, if the following reasoning is valid, and the facts on which it is based are sure, it seems to me that we have before us an arrangement which, for the simplicity of its mechanism and the efficiency of its action, can hardly be exceeded among the many marvels of higher organisms.

We saw that many forms of functional action of the nerve elements may produce opposite effects on nerve cells, according to the degree of the action. We saw also that the up-going impulses from the muscles are generated by the mechanical influences of compression by the fibres and of tension, and applied from without, and that, although we cannot exclude, we also cannot trace evidence that other influences are concerned in the stimulation. Further, we saw that these mechanical stimuli seem to suffice for the needs that can be perceived and to be adequate for the effects that we can observe.

The endings of these nerves need further investigation. The connective tissue in which they end must vary in its state with every change in the state of the fibres. Surrounding the fibres, its state must vary with each variation in the state of contraction of the muscular protoplasm. The widening of the fibres will both compress and extend the tissue with the nerve endings. The stimulation thus effected will be distinct in origin from that due to tension on the muscle. We have no evidence that it will be different in nature. But it is obvious that this alone—the lateral stretching and compression—causes the only stimulation of the nerves that can result from the activity of the muscle itself. It is important to keep this in mind. The two sets of impulses may be distinguished as action-impulses and tension-impulses.

In every muscular action not only do the muscles contract that act in the desired direction, but their opponents also contract. This fact is familiar, and is daily impressed on the observer by the effect of the paralysis of opponents on the efficiency of muscles. It is convenient and even necessary to keep the two sets of contraction distinct by a difference in name. A movement being due to the acting together of fibres, often of more than one muscle—this may be termed "synergic," and the contraction of the opponents "antergic." Both series are excited by the same processes in the grey matter of the brain. Movements, not muscles, enter into our conscious action. We have no power to avoid the antergic action, for we have no intention of producing it.

A muscular action may merely exert force or cause movement. The difference is purely a question of resistance—whether this is less than the force. There can be no essential difference in the primary impulse that descends from the brain, because it is not necessarily known whether there will be movement or not. But there is a great difference in the effect of the movement on the state of the muscles. The acting muscles shorten, their opponents lengthen. This elongation involves a diminished degree of contraction in proportion to the elongation. If this diminution did not occur, the acting muscles would be unable to effect the movement. We may formulate a law which may be only roughly exact, but must be approximately true, that the proportion between the synergic and antergic contractions is direct when there is no movement, inverse when there is. The initial proportion must be the same in each case, since the innervation is the same. How is the diminution of the contraction effected?

I think it is demonstrable that the diminution is due to the inhibitory or restraining influence, on the motor cells, of the increased stimulation of the afferent fibres of the muscle. First, there is no other way of explaining its occurrence. Secondly, we have the phenomenon analysed for us by disease in the case of the upper eyelid. The descent of this, when the eyeball is moved down by the action of the inferior rectus, is not due to the orbicularis; it is effected indirectly by the contracting inferior rectus, perhaps by the pressure of the upper part of the eyeball against the lid. If the orbicularis is paralysed (disease of the facial nerve) the eyelid descends as in health, the only difference being that, in the later part of the movement, it lags a little behind the other, and the more the older the patient. It is as if the loss of tone in the orbicularis, which helps to keep the lid against the eyeball, lessened a little the effect of the globe on the lid. I pointed the fact out years ago, and also the significance with which we are now concerned—the evidence it affords that tension on a contracting muscle is the cause of its relaxation to permit movement. I may quote the passage: "In the absence of the downward movement of the globe the attempt at the movement does not cause the relaxation of the levator which accompanies the actual movement. Relaxation implies inhibition of the centre which is in tonic action. If it were due to a central mechanism, a fruitless attempt to move the eye down would cause an increased inhibition of the levator, instead of which there occurs no inhibition at all. The inhibition of the levator must be a reflex result of the movement. The afferent impression causing such inhibition may originate from the tension on the fibres of the levator by the movement of the globe. Whatever is its mechanism is probably also the mechanism by which the relaxation of the opponents of other contracting muscles is effected."[1]

These facts appear to justify the conclusion that the activity of the motor cells of a muscle is lessened when the stimulation of its afferent fibres is in excess of the degree that is caused by that activity and corresponds to it. The tendency of the resistance to yield at once causes tension on the opposing muscle, and the tension must stimulate the nerve fibres, adding the tension-impulses (see above) to the action-impulses already produced. Until this tendency occurs, these fibres cannot be exposed to such tension from traction on the muscle, because all tension was

[1] The Movements of the Eyelids: Medico-Chirurgical Transactions, 1879, vol. lxii., p. 458.

produced by, and therefore must be borne by, the contracting fibres. As the movement goes on, the same law will constantly obtain, and thus the activity of the cells will be diminished in proportion to the movement, and the contraction of the antergic fibres will vary inversely to that of the synergic fibres, the condition which we saw must obtain. We cannot assume that the effect of the tension is produced on the muscular protoplasm, because we have no evidence that the fibres can elongate unless the activity of the cells is lessened. Nor can we assume that the action is exerted upon the cells of the cerebral cortex in the first instance. The perfect correspondence in time, so far as we can perceive, seems to preclude so distant an action; while we have other evidence (in the phenomena of the muscle reflex action) that the stimulation of the afferent fibres of muscle can influence its spinal motor cells. Neither, however, can we exclude a secondary influence on the cortical cells through the cerebellum. We may indeed assume that the progressive restraint of the spinal motor cells for the muscle is followed (followed in fact and in mechanism, although for practical purposes we might say accompanied) by a corresponding diminution in activity of the cells in the cerebral cortex. We are justified in assuming this, because similar impulses from the muscle must ascend the spinal cord, and a similar effect in the motor cells of the cortex is a legitimate assumption. Thus the stimulation of the spinal cells will be lessened. The fibres being less contracted in consequence of the diminished activity of their cells, that part of the afferent impulse which is produced by the fibres and by the activity of the motor cells is less, but less as the result of the state of the cell. Through the cerebellum and cortex of the brain the activity of the cells falls not only in its effective degree (that which is left after the restraining influence has acted), but also in its tendency. This will bring the activity of the spinal motor cells and the afferent impulses *they* cause into the proper proportion—or rather constantly tend to do so. Thus there must be a progressive process of (1) restraint of spinal motor cell, diminished contraction in the muscle, elongation, (2) diminution in the activity of the cerebral cell, and of the stimulation of the spinal cell; all progressive under the influence of the tension-excess of the afferent impulses, which will continue, but continue in degree just sufficient to effect the gradual change necessary to permit the motion. All this will follow, as in a machine, from the tendency of the resistance to give way.

In the synergic muscles, which produce the movement, the afferent impulses will be purely proportioned to the activity of their cells, since there can be no tension beyond that which is borne, because produced, by the contracting fibres.

The tension on the muscle, which thus restrains the motor cells in their induced activity, excites them to increased action when they are only in that state of continuous activity which underlies muscular tone. This is clearly seen in the muscle reflex action such as is obtained by suddenly depressing the patella and making the rectus tense. Here, then, we have the opposite result related more clearly to a difference in the state of the cells acted on than to a difference in the strength of the stimulus. It is important to remember that this may be one of the conditions determining the result, not only in this instance, but in others in which we cannot perceive the nature of the conditions with the same clearness. Moreover, we see also the cause for the effect of voluntary contraction in preventing the effect of the attempt to obtain the knee-jerk. Instead of the activity of the cells being increased, it is lessened by the impulse produced, and the knee-jerk is prevented.

THE PUBLIC HEALTH MEDICAL SOCIETY.—A meeting of the council of the Society of medical men possessing registrable qualifications in public health was held at the offices, 101, Great Russell-street, on Thursday last. June 5th was fixed as the date of the annual general meeting, to be held at the Holborn Restaurant. At 7 P.M. on the same day, the President, Sir Charles A. Cameron, will preside at the annual dinner. The dinner committee reported that already upwards of fifty promises to be present had been received from members and their friends, including, among others, Surgeon Parke. It is desirable that gentlemen possessing Public Health qualifications should embrace this opportunity of meeting for the consideration of the many important questions affecting their interests.

ON THE REMOVAL OF PYÆMIC THROMBI FROM THE LATERAL SINUS.

BY CHARLES A. BALLANCE, M.S., F.R.C.S.,
ASSISTANT SURGEON FOR DISEASES OF THE EAR, ST. THOMAS'S HOSPITAL, AND ASSISTANT SURGEON TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET, AND TO THE WEST LONDON HOSPITAL, ETC.

(*Concluded from page 1061.*)

Remarks.—It is very difficult to estimate the number of deaths which occur yearly from intra-cranial complications of ear disease, but it is evident (as was shown by Mr. Barker[1] in his Hunterian lectures) that the Registrar-General's return is wholly misleading with regard to this point. Whilst in this country about 400 persons are said to die annually of otorrhœa, there are thousands of others whose deaths are recorded without classification under the headings "simple meningitis," "brain disease," and "general septic affections"; and many of these are deaths which are primarily due to disease of the ear. After the success which attended surgical interference in Mr. Lane's case and in my cases, there can be no doubt that many patients suffering from pyæmia or threatened with pyæmia due to septic infection of the lateral sinus might be saved from death by early operative measures. There is no way of knowing the number of patients who annually die in London from sinus pyæmia, but I would hazard a guess, and I believe I am understating the truth when I estimate such deaths at the rate of nearly one per week. In making this guess it is necessary to remember the extreme prevalence of otitis media in a city population surrounded by and living under the worst hygienic surroundings, and the constant and universal neglect of chronic purulent discharge from the ear from which at any moment may arise a fatal disease. Dr. Newton Pitt[2] says that at Guy's Hospital during the last twenty years there have been fifty-seven necropsies on patients dying of complications arising from ear disease. Of these, twenty-two were found to have thrombosis of the lateral sinus. A patient may suffer from pyæmia arising from disease of the temporal bone without thrombosis of the lateral sinus occurring; hence the above list of twenty-two cases does not include all the deaths from pyæmia. During the last four years at Guy's twenty-seven necropsies (2 per cent. of all necropsies) were performed on patients dead of intra-cranial inflammations secondary to ear disease, and many of these were cases of sinus pyæmia. Recently in St. Thomas's Hospital there have been seven[3] such cases; one was operated upon and recovered, the others died. Dr. Bristowe[4] reported three cases of sinus pyæmia in the St. Thomas's Hospital Reports, vol. xvii. (1889). From St. Bartholomew's Hospital cases of sinus pyæmia were reported by Sir Dyce Duckworth in a clinical lecture.[5] Last autumn three cases were operated on at the West London Hospital, all at a late stage of the disease, and they all died. In only one of these cases was the vein ligatured, in the other two the operative procedure consisted in removing fetid pus from the bony groove in which the lateral sinus lies. By far the largest number of cases of death from ear disease I believe occurs outside a hospital, and these doubtless (as the hospital cases may be) are often not diagnosed correctly, not treated operatively, and not examined after death, so that their true nature is never suspected.

There are several points of interest about my four cases to which I desire to refer, and afterwards I propose to deal especially with the questions of diagnosis and treatment.

I. When the internal jugular vein is tied the face may become blue in consequence of the obstruction to the venous circulation. The right internal jugular vein is usually a little larger than the left, since it is continuous with the right lateral sinus, which is generally more capacious than the left. The venous turgescence would probably, therefore, be more marked in cases in which it was necessary to interfere on the right side. It is an error to suppose that the lateral sinuses are continuous at the torcular Herophili; the right sinus is continuous with the superior

[1] Illustrated Medical News, July 5th, 1889.
[2] Goulstonian Lecture I. Brit. Med. Jour., March 22nd, 1890.
[3] St. Thomas's Hospital Reports, vol. xviii., p. 118 (1890).
[4] Four Cases of Chronic Ear Disease, followed by Intracranial Complications and Death.
[5] THE LANCET, Jan. 5th, 1889.

longitudinal sinus, and the left sinus is, as a rule, a continuation of the straight sinus. There are sharp bends in the venous channels where the lateral sinuses commence, and these are joined across the front of the internal occipital protuberance by means of a separate sinus or cross-branch of small size. Thus a thrombosis of one lateral sinus need not, and probably will not, be accompanied by thrombosis of the other lateral sinus, and so life is spared. Sometimes the lateral sinus on one side is very much smaller than on the other. In the museum of St. Thomas's Hospital there is a skull which has no groove on it on one side for the lateral sinus; and so in this case during life the lateral sinus on the side in which the groove is absent must also have been wanting, or only represented by a very small channel in the dura mater. It appears that a man may get on very well with only one lateral sinus, and it must be remembered that the operation recommended does not block a still patent venous channel, but one which is already packed with septic clot and impermeable. The tapering extremity of the clot in the jugular is probably often not septic; hence emboli detached from it may or may not contain septic organisms—emboli which may when detached not be infective, yet may become so and break down at a later stage in consequence of the deposit on or in them of organisms which are circulating in the blood. The infarcts in Case 3 did certainly not appear to have any tendency to break down; and I think they may have been produced by small portions of aseptic clot being displaced into the blood current by the disturbance of parts at the operation. Pathologists have told me that a healed pyæmic infarct of the lung has never been seen on the post-mortem table. In Case 1 the patient certainly suffered from such an infarct, brought up blood-stained sputa for some days, and yet he recovered. His rapid convalescence, notwithstanding the formation of secondary pyæmic foci in various situations, is most interesting; it points to the probability that the system had only to fight against that amount of poison which was already in it at the time of the operation—that, in fact, infection only occurred from the primary focus, and that the secondary foci were incompetent or unable to carry on the disease and infect other parts of the body. It seems, then, that the plasma cells[6] may be successful in the war they wage with the invading pathogenic organisms of the fatal disease—pyæmia,—so long as at an early stage of the malady further infection from the primary focus is abolished. This phenomenon of the arrestment of the process of pyæmia when the primary source of infection is cut off may be compared to the clearing up of a phthisical lung or lungs when the primary source of tuberculosis is removed—say, after amputation of a tuberculous knee. In Case 1 the internal jugular vein was irrigated daily with antiseptic lotions for three weeks. The fluid being injected into the lateral sinus, came out in a free stream through the wound in the neck. The patient always declared that he could feel the water trickling down the inside of his neck. Veins have always been supposed to be insensitive structures, so every care was used, in order to test this question, to employ lotions of blood-heat temperature without force, but the man still maintained that he could feel the moving fluid inside his neck. It was thought that possibly the sensations experienced by the patient might have been due to temperature, or perhaps to distension of the vein and pressure upon surrounding parts, such as the vagus. In my perplexity I appealed to my friend and colleague, Dr. Sherrington, for information as to the most recent physiological views as to whether veins are endowed with sensibility. He replied as follows: "I suppose the use of anæsthetics during the operations of the surgeon has happily made it difficult to obtain an answer from actual observation. In the days prior to anæsthetism the reply must have been a matter of common knowledge to the medical practitioner. To-day it is not so easy. One must, in default of experience, resort to 'authority.' There is the classical discourse by Alberti von Haller;[7] and I have referred to it in your behalf to see if he has anything upon the point desired. He relates observations which show that arteries and veins, at least the larger ones, are not possessed of sensibility, and includes them with other structures, tendons, &c., in his category of parts of the body which 'sensu carent.' He says,[8] 'Arteriæ venæque non videntur dolore.' And, again, on the succeeding page: 'Ipsi homines, quibus arterias ligari jussi, fuerunt autem non paucissimi de adstricto vinculo nunquam conquesti sunt.' A delightfully naïve way of closing the question, as it seems to us of these latter days. On the other hand, it is worth remembering that there is in the case of the heart the depressor nerve, which contains fibres conveying nerve impulses from the heart up to the medulla oblongata—a nerve which is therefore *afferent*, but whether *sensory* is another matter. Personally, I think Haller's statement enough to convince one that the large bloodvessels are not endowed with sensibility in any ordinary sense of the word. Experiments in the laboratory are in accord with Haller's opinion. Considering the manner in which bloodvessels and nerves run in company, a negation such as Haller gives is valuable as showing the ease with which he must have investigated the point, and his subjects being human beings capable of stating their sensations gave him extraordinarily favourable opportunity of judging." The insensitiveness of large vessels appears proved by Haller's record, and is supported by an event which happened to a friend of mine in the country. A large Newfoundland dog was wounded by a sharp instrument. There was no chloroform obtainable, but the dog allowed my friend to examine the wound. He found that the brachial artery had been nearly divided. He placed a ligature of string around the artery on either side of the wound in the vessel, and after pulling each tight he completed the division of the artery. As the upper ligature was being tied the dog growled; so it was loosened, as it was thought that a nerve filament might have been included in the loop of the ligature. Nothing was seen, and the ligature was again tightened, when the dog growled again. This happened three times, and on the fourth occasion on which the ligature was loosened a minute nerve was found to be included. The ligature was then applied to the artery free of the nerve, and on the knot being pulled tight for the fourth time the dog did not growl or evince any sign of pain.

II. The early diagnosis of these cases is rendered all the more difficult by the absence in some of them of otorrhœa. In nine out of fifty-seven[9] cases there was no otorrhœa, and I myself, in years gone by, have seen cases without otorrhœa sent to the post-mortem room as cases of typhoid, when the inspection revealed pyæmia due to deep-seated ear disease; such as a small extra-dural collection of inspissated pus on the posterior surface of the petrous bone lying just external to the internal auditory meatus. Another puzzling fact is one I learnt from my revered teacher, the late Dr. Murchison—that otorrhœa may supervene in the earliest stage of typhoid; and it seems that cases of typhoid complicated with otorrhœa are very prone to commence apparently suddenly with a rigor, or even rigors, the disease being so modified that it may be impossible, with our present knowledge, to decide between the alternatives of typhoid or pyæmia. I may mention two such cases.

CASE 1.—A man aged thirty-five came to my out-patient room at the West London Hospital complaining of earache, headache, vomiting, and general malaise. For six months he had had a discharge from the right ear; six days ago he had a rigor whilst at work. He said the discharge, which was offensive, had not been so profuse since the shivering. The temperature was 104° F. There was some fetid pus in the meatus. This patient was taken into the hospital and watched very carefully every day for a week, when a typical typhoid eruption appeared. During this week the temperature was continuously high,[10] and there was neither rigor nor vomiting. If the thermometer had registered a temperature, say, of 99°, or if another rigor had set in, the mastoid would certainly have been opened; and it would, I think, be preferable to trephine a typhoid than allow a case of pyæmia remediable by operation to die without relief.

CASE 2.—J. W——, aged twenty-two, was admitted into St. Thomas's Hospital under Dr. Harley. The patient had had discharge from the left ear off and on for several years. Two days before admission, having been quite well up to that time, he began to shiver, and had repeated hot and cold feelings, but no actual rigor. On admission he was suffer-

[6] The Genesis of Scar Tissue, Journ. of Physiol., Sherrington and Ballance, 1889.

[7] Opera Minora, Lausanne, 1762. [8] Vol. i., p. 418.

[9] Brit. Med. Jour., March, 1890, p. 643.

[10] Murchison, the Continued Fevers of Great Britain, second edition, p. 516: "Enteric fever would be excluded from the diagnosis by a temperature approaching to normal on any evening during the first week; and, on the other hand, by a temperature of 104° on the first day or second morning of illness."

ing from severe frontal headache; tongue furred; temperature varying from 102° to 104°; pulse 88. There was a small perforation in the left membrane and scanty offensive discharge. So far it might be the commencement of enteric fever or some extension of ear disease. The condition remaining the same, two days later I incised the membrane freely, but no pus escaped. A few days afterwards a fair eruption of typhoid spots took place, and the nature of the illness became plain. The most noteworthy feature in this case was the small daily variation of temperature, which made a diagnosis of pyæmia highly improbable.

It seems here a convenient opportunity of protesting against the common practice of leeching or blistering the mastoid region in serious cases complaining of pain and tenderness behind and in the ear. The ultimate diagnosis may thus be fatally hindered, and I think that no local treatment to the skin in the neighbourhood of the ear should be carried out in any case in which there is the slightest suspicion that intra-cranial mischief is occurring, or may happen. Frequent antiseptic irrigation of the external meatus is useful, but nothing further should be done until the case is clearly made out.

The following are the signs that should be especially looked for in any case in which septic thrombosis of the lateral sinus is suspected. When present together they constitute a group of symptoms which are pathognomonic of this affection: 1. A history of purulent discharge from the ear for a period of more than a year. 2 The sudden onset of the illness, with headache, vomiting, rigor, and pain in the affected ear. 3. An oscillating temperature, reaching to 103° or 105° F., and then dropping, say, below 100°. 4. Vomiting, repeated day by day. 5. A second, third, or more rigors.[11] 6. Local œdema and tenderness over the mastoid or in the course of the internal jugular vein. 7. Tenderness on deep pressure at the posterior border of the mastoid and below the external occipital protuberance. 8. Stiffness of the muscles of the back or side of the neck. 9. Optic neuritis.

Typhoid fever, I think, may fairly be excluded if the temperature oscillates greatly, if there be repeated vomiting, and if the patient suffers from a second or third rigor. The sudden onset of the patient's illness also is characteristic of pyæmia, and militates against a diagnosis of enteric fever, though from the case already related it does not disprove the existence of that disease. It is very remarkable that local œdema and tenderness over the mastoid may be entirely absent even when fetid pus is contained in the bony groove of the mastoid for the lateral sinus, and a purulent clot blocks the sinus itself. It is therefore wise not to lay too much stress upon these outward indications of deep-seated mischief. The superficial sclerosis of the mastoid, which is sometimes associated with long-continued caries of the deeper parts of the temporal bone, may explain possibly the absence of external œdema, or it may possibly be that in rare instances the mastoid vein is absent. This œdema has been termed a phlegmasia alba dolens in miniature.[12] The practical point is this, that often the surgeon must operate, if life is to be saved, when there is no mastoid œdema. In the absence of signs of inflammation over the mastoid, I attach much importance to tenderness elicited by exerting deep pressure at some point along the posterior border of the mastoid, in the course of the lateral sinus, or below the external occipital protuberance. There may be also spontaneous pain complained of in the latter situation, and a sensation of weight at the back of the head. The absence of earache and discharge from the meatus is of very little moment, but a history of long-continued disease of the ear, or the presence of caries as indicated by an examination with the speculum, are valuable aids in diagnosis. To rely upon such variable signs as earache and purulent secretion from the tympanum is, however, likely to lead the observer astray; and even the sudden cessation of a purulent discharge at the commencement of the acute illness might lead, if too much stress were laid upon it, to a false conclusion, as is seen by the history of the case of enteric fever already mentioned. However deep-seated, and sometimes severe, pain in the affected ear is seldom absent at the beginning of the illness in an ear case. The character of the discharge, whether fetid or otherwise, does not appear to lend much aid to the diagnosis. An offensive discharge, though an important indication of bone mischief, does not necessarily contain poisons[13] equal in virulence to those growing in inodorous pus. Some workers[14] have shown that fetid pus contains micro-organisms which, when grown in pure cultures and injected into the lower animals, do not cause pyæmia; whilst, on the other hand, inodorous discharges have been shown to be infested with organisms, which under like conditions are productive of rapid and fatal lesions. And again pyæmia arising from disease of the temporal bone, whether associated or not with lateral sinus thrombosis, may occur without any indication of discharge from the ear. It will therefore be evident that little can be gauged as to the true nature of the case from the character of the pus or the absence of pus in the external auditory meatus. Stiffness of the muscles of the neck is certainly an important sign, since it is often dependent on deep irritative lesions. Œdema or tenderness over the upper part of the jugular vein is caused by an extension of the clot from the sinus into that vessel, and depends either upon phlebitis of the wall of the vein (see Case 2) or on enlargement of the deep cervical lymphatic glands (see Case 3) which lie against it. With regard to optic neuritis, this condition of the optic nerve does not necessarily accompany septic thrombosis of the lateral sinus, as is seen by Case 1, in which it was not[15] observed at any time. Extra-dural abscess, moreover, is but rarely associated with optic neuritis. The question that arises is not a statistical one—it is of little importance to learn in how many cases of thrombosis and in what percentage of cases of extra-dural abscess there is and there is not optic neuritis, but what is the indication which the presence of this state of the optic nerve gives to the surgeon? Messrs. Lawford[16] and Edmunds have paid great attention to this symptom, and have demonstrated irrefragably, for me at least, that in all cases of optic neuritis of intra-cranial origin the affection of the optic nerves is due to an extension of inflammation to their sheaths from inflamed pia mater, and that therefore optic neuritis in these cases is diagnostic of basal meningitis. This meningitis may be so slight as to cause no symptoms during life, and to be invisible to the naked eye at a post-mortem examination.[17] Optic neuritis then, if absent in a case in which thrombosis, extra-dural abscess, or both be suspected, does not hinder or assist at a diagnosis of these conditions; but, if present, it points to the fact that the dura is already sloughed, or is involved in inflammation to an extent sufficient to produce slight basal meningitis as far forward as the optic nerves. Early optic neuritis would of course put enteric fever out of the question, and should prompt the adoption of immediate operative measures. Of my three cases which had optic neuritis one recovered and the other two showed no obvious naked-eye signs of basal meningitis on the post-mortem table. My colleague, Mr. Keetley, operated upon a case last autumn at the West London Hospital. The patient had very intense optic neuritis and was almost comatose at the time. He found a thrombosed sinus, and fetid pus in the bony groove and on the posterior surface of the petrous bone. At the post-mortem enamination there was found a small recent opening in the dura which had allowed pus to pass from the extra-dural abscess and collect between the tentorium and the upper surface of the cerebellum. The trephine opening had drained the extra-dural abscess, but not the collection of pus in the intra-dural space. The patient died comatose not long after the operation. Such a case, if seen earlier, before the dura had sloughed and the optic neuritis in consequence had become so marked, would probably have been saved.

There is another class of cases in which discharge from the ear, optic neuritis, and occasional headache or earache are the only symptoms. Such a case, associated with loss of flesh and strength, has recently been under my care. From

[11] Ibid., p. 545: "Three out of sixty-three cases of enteric fever commenced with rigors. In several instances not included in this analysis I have observed decided rigors, and, in fact, all the phenomena of ague during the first few days."

[12] See Remarks on the Differential Diagnosis of Intra-cranial Affections Secondary to Disease of the Ear. By Walter Edmunds. St. Thomas's Hospital Reports, vol. xvi., 1887.

[13] Recently Levy and Schrader of Strasburg have published an important paper on the Bacteriology of Otitis Media. They lay some stress, in cases threatened with or suffering from intra-cranial complications, on the presence of a capsuled diplococcus intermediate in characters between the ordinary cocci of pus and Fränkel's pneumococcus. Arch. f. Exper. Path. u. Pharmacol. Leipsic, 1889, vol. xxvi., pp. 223-236.

[14] Rohrer confirmed by Barker: Illus. Med. News, p. 13, July 6th, 1889.

[15] Compare Dr. Bristowe's three fatal cases of thrombosis of the lateral sinus. Optic neuritis was not present in these cases.

[16] Ophthalmological Society's Transactions, vols. iii., iv., v., and vii. See also Kipp, Archives of Otology, vol. viii. (1879) and xiii. (1884).

[17] See Ophthal. Trans., vol. iii., p. 140. Case 19 (1883).

the views expressed as to the etiology of optic neuritis these cases are certainly very serious; and I believe they should be treated (promptly) by opening the antrum and flushing the tympanum frequently with strong antiseptic lotions. The case above mentioned was operated on in this way after optic neuritis had been present for months. A metal drain was passed through the mastoid, tympanum, and external auditory meatus, and kept *in situ* for two months. The patient after the operation at once, and markedly, improved in general health, and is now in a fair way to complete recovery.

Another important class of cases of which typical examples are to be found in the papers of Sir Dyce Duckworth[18] and Dr. Hawkins[19] are those which commence with severe symptoms—headache, earache, shivering, vomiting, and drowsiness,—and which rapidly and suddenly convalesce, usually after a critical discharge from the external meatus. It is often difficult, except doubtfully, by the relative severity of the signs, to distinguish between the symptoms due to pus pent-up in the tympanum or mastoid and those indicative of impending pyæmia. The plan of treatment to adopt appears to me to be quite clear. The present or next attack from which the patient suffers may not end favourably. It is certain, then, that it is, as a rule, the surgeon's duty to explore the disease through the mastoid, scrape away carious bone, and provide efficient drainage for the tympanum and other diseased parts, so that no longer will there be any chance of the penning up of putrefying pus or the spread of inflammatory disease to the cranial cavity.

In yet another series of cases an extra-dural collection of pus of non-offensive character may collect in the groove for the lateral sinus, and be evacuated by a trephine opening made in order to explore the mastoid. An extra-dural abscess in this position is due either to the extension of the carious process backwards to the groove, generally from the posterior wall of the tympanum, or the inner extremity of the posterior wall of the external meatus; and more rarely from caries of the mastoid, or caries opening on the posterior aspect of the petrous in the neighbourhood of the internal auditory meatus, or to the extension backwards under the superior petrosal sinus of an extra-dural abscess first formed over the tegmen tympani. If the symptoms be slight and the pus be odourless, it is not necessary to deal with the sinus and vein, but it is highly desirable that the deep-seated bone disease should be thoroughly exposed and removed, so that there may be no chance of a repetition of the same symptoms, or those still of graver import, which might on the second occasion prove less amenable to treatment. Such a case has recently been in St. Thomas's Hospital under the care of Mr. Pitts. The constitutional signs were slight, and there was pain in the ear and at the back of the head, with some tenderness along the course of the sinus on deep pressure. Mr. Pitts trephined and gouged the mastoid, and allowed of the escape of inodorous pus from the groove for the lateral sinus. The symptoms then rapidly disappeared.

III. The diagnosis having been made, there remains for discussion the question of treatment. This must in all cases be twofold—viz., the free exposure and removal of the focus from which pyæmic infection has occurred or is threatened; and secondly, the establishment of a block in the highway, along which the infecting agents are travelling from the local focus into the general circulation. In cases of lateral sinus thrombosis due to ear disease, this twofold method of treatment is carried out by first freely opening the mastoid, gouging away carious bone, allowing of the escape of extra-dural collections of pus, and removing with spoon and syringe the clot itself within the lateral sinus, and afterwards by placing two ligatures on the internal jugular vein nearer the heart than the termination of the septic clot within it, and dividing the vessel between them. At the beginning of 1886 Mr. Horsley[20] suggested ligature of the internal jugular vein in cases of pyæmic thrombosis of the lateral sinus, but qualified the suggestion by the opinion that "the operation should only be done when the first indication of embolism appeared." In April, 1889, Mr. Lane[21] reported a case of purulent thrombosis of the lateral sinus in a boy aged ten, in whom he ligatured the internal jugular vein. The boy made a rapid recovery. It is obvious that this remarkable suggestion of Mr. Horsley's has a far-reaching importance in surgery, and may be applicable under many conditions besides that at present under review. There is no risk whatever of hæmorrhage from the lateral sinus provided there be a sufficient opening in the skull. The position at which the trephine should be applied is shown in Fig. 1, p. 1060. The trephine opening should be enlarged in the direction of the sinus in both directions, so as to give ample room for dealing with it. The trephine which I use is the "antiseptic trephine" of Dr. Roberts of Philadelphia, which was first brought under my notice by Sir William Mac Cormac, and to which I have made a trifling addition. The great advantage of this trephine is that it can be thoroughly cleansed, which the ordinary trephine does not allow of. It is very important to enlarge the trephine opening for the sinus forwards into the mastoid antrum, so as to ensure a thorough cleansing of the cavity of the antrum and tympanum, which are frequently filled with masses of pus of cheese-like consistence (see Case 4). If a doubt exists as to whether the sinus be plugged or not a grooved needle may be inserted. It is bad practice to pass a ligature around the sinus, for in so doing the intra-dural space is opened and may be infected. If necessary the sinus can easily be plugged or seized with ordinary artery forceps. If a septic clot be found within the sinus, it would probably be wiser to at once proceed with the ligation of the internal jugular vein, lest any portion of it be loosened from its attachment, and carried into the lungs. The vein having been ligatured, the surgeon may proceed to slit up the outer wall of the sinus as far as the limits of the opening in the bone will allow, and then with curette and syringe endeavour to remove as much as possible of its abnormal contents. I have used in all my mastoid operations solution of perchloride of mercury (1 in 2000), and I believe it is the best and most efficient antiseptic to employ. Constant irrigation should be carried out during the progress of an operation, so as to obviate the infection of fresh-cut surfaces, which might well occur whilst fetid pus, foul bone, or inspissated purulent collections are being removed.

With regard to the vein, we can now go a step further than the suggestion made by Horsley in 1886. It should certainly be ligatured in all cases of thrombosis of the sinus associated with ear disease; and though it may not be possible to determine whether a given thrombus be septic or not septic, yet the probabilities are so great that if the thrombus be not already infected it will become so, that it would be foolhardy in such a case not to ligature the vein, and especially is this so since it does not appear that the blocking of one jugular vein is of any consequence to the individual. The only objection that could be urged against the doctrine of dealing with an apparently uninfected clot in the radical way suggested is that cases not due to ear disease are known in which recovery has taken place after non-septic thrombosis of the lateral sinus, and that in these canalisation of the clot may occur, so as to allow of the passage of blood again along the once plugged sinus. This objection does not appear to me to have any weight, and the risk of leaving untreated a clot in the immediate neighbourhood of very virulent septic matter in the hope that it may remain uninfected seems so great that it puts out of court what is at best only an imaginary advantage—viz., the chance of the sinus becoming patent again, and thus functionally useful to the patient. To the vein should be applied two ligatures, and the vessel should be completely divided between them, so that the upper septic portion of the jugular may be completely isolated from the lower, which is still an integral portion of the vascular mechanism. The lower end of the upper segment of the vein might be stitched, if long enough, to the upper angle of the wound in the neck, which would facilitate the closing and healing of that wound and the irrigation of the affected venous channels. When the vein and sinus are freely open, it is not always (or ever) possible to remove by syringing at once all their septic contents. The post-mortem examination of Case 3 showed that the central part of the coagulum had been carried away in the stream of sublimate, but that the peripheral portion was firmly adherent, a fact due doubtless to the proliferation of the endothelial lining of the vessels set up by the presence of clot, and the advance of the endothelial cells into its outer layers. It may be laid down as an axiom that an operation upon a purulent thrombus in the lateral sinus is perfectly hopeless unless the jugular

[18] Cases illustrating the Remote Effects of Otitis, THE LANCET, Jan. 5th, 1889.
[19] The Diagnosis and Treatment of Pyæmic Complications of Ear Disease, St. Thomas's Hospital Reports, vol. xviii.
[20] Transactions of the Clinical Society, vol. xix. [21] Ibid., vol. xxii.

vein be ligatured at the same time; pulmonary pyæmia will inevitably occur. I have seen such cases, and Lane mentions a very striking one on page 263 of the Transactions of the Clinical Society, vol. xxii.

It is well known that pyæmia occurs from disease of the temporal bone independently[2] of thrombosis of the lateral sinus, or of extra-dural abscess. Under such circumstances it behoves us to inquire whether surgical interference offers any hope of life to the patient. The answer to this question is, for me at least, an emphatic affirmative. Whether the sinus be full of clot or moving blood it matters not; in either case the poison is being poured into the sinus or, say, through the vein of the cochlea into the jugular; and the method which has proved efficacious in saving life in the one case will assuredly, if promptly applied, be equally successful in the other. The local disease of mastoid or petrous must be freely exposed and asepticised with sublimate solution. The vein must be ligatured in the neck, and the sinus must be freely exposed in the usual way behind the ear, opened and plugged. Thus an artificial thrombosis of the blood arrested between the plugged sinus and the ligature on the vein will be effected. It will then not be possible for any further infection to happen from the primary focus of disease, for the collateral circulation is not sufficient to carry the infective material down the other jugular, as is shown by the histories of the four cases on which I have operated. The whole or the greater part of the clot thus artificially induced would not at first be other than healthy in character, but it might subsequently become infected with micro-organisms, in which event it would be easy to wash it out, especially if the lower end of the upper segment of the vein had been stitched to the margins of the skin wound in the neck. By these means the surgeon may erect an effectual barrier against further acute pyæmic infection from the primary focus, which may at once be successful in arresting the symptoms of danger, or may materially assist a patient in combating the symptoms of acute pyæmia until the chronic stage is reached, which in this disease is always of hopeful import as far as life is concerned.

It is impossible to close this paper without referring to the question of prophylaxis. How much better it would be if patients would submit to, and their advisers would recommend, the adoption of more radical measures than simple antiseptic irrigation of the meatus in cases of long-standing caries of the temporal bone. Pyæmic infection of the sinus may at any moment happen, and then a prolonged and critical operation must at once be undertaken if the patient is to be snatched from death. In this respect the history of Case 4 is very instructive. The symptoms were discharge from the ear and occasional earache for two years. During all this time loss of strength and general signs of ill health were noticed. The opening of the mastoid antrum, discovered at the final operation to be filled with inspissated pus, any time during these two years would in all probability have arrested the bone disease and prevented the onset of that pyæmic state which nearly brought this patient to an early death, and from which she was with difficulty rescued by a hurried and complicated operation.

Harley-street, W.

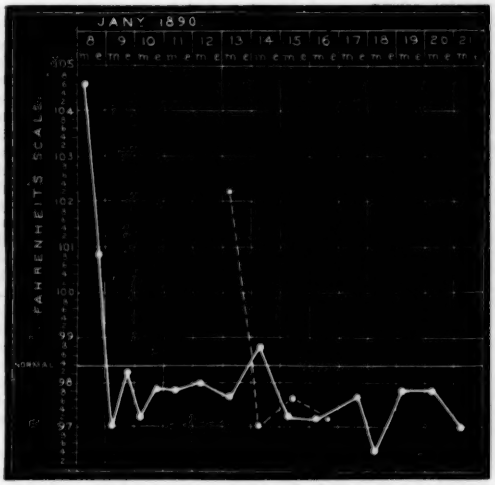
ON THE

OCCURRENCE OF THE PNEUMOCOCCUS IN THE SPUTUM FROM A CASE OF INFLUENZA.

BY JAMES W. FRASER, M.D., C.M., M.R.C.S.

THE expectoration of the case of influenza here described contained, on the third day of the illness, practically no other microbe than one answering in microscopical and cultivation characters to the pneumococcus of Friedländer. The case is therefore of interest in view of the accounts from Vienna of the discovery of this microbe in the expectoration of influenza cases by Dr. Jolles, and the opposing results obtained by Professor Weichselbaum.[1] Clinically the case was one of the respiratory or broncho-pneumonic variety of the epidemic.

Mrs. F——, aged sixty-one years, was seized on Jan. 6th with rigors, headache, and catching pain in the left side above the breast. She had to walk a considerable distance on that day, and did it with much difficulty. On the 8th, when first seen, she was in bed, evidently very ill, with a temperature of 104·6°. The pain in the side was very severe, and increased by the cough. The expectoration was "prune juice" in character. This was the sputum, which was examined bacteriologically. The physical examination showed a little consolidation at the bases of the lungs posteriorly, but not reaching above the inferior angle of the scapula. Five grains of antipyrin were ordered every four hours, and a mixture of digitalis and carbonate of ammonia, with the result that, when seen again in the evening, the temperature had fallen to 100·8°, and next morning to 97°. The antipyrin was then stopped, five doses having been taken. The pain was gone, the cough loose, and the tongue cleaning; but for more than a fortnight the patient remained in a very weak state, requiring stimulants both medicinal and alcoholic. The temperature for the whole of this time, save on one occasion, was subnormal, and the pulse in the early part of the time was intermittent on exertion. The patient, however, finally made a perfect recovery. The diagnosis of this case lies between aborted pneumonia and influenza. On its own merits the case appears to belong to the latter category. The very sudden invasion, the equally sudden fall of temperature, and the long period of weakness with subnormal temperature, are all in favour of this; but further proof was afforded by the infection on Jan. 11th of the patient's husband, who had a much slighter attack, and of the gastro-intestinal form. His temperature is represented on the chart by the dotted line, that of Mrs. F—— by the continuous line. Mr. F——'s



attack may be briefly recorded as follows: On the 11th, rigors, headache, and coryza; on the 12th he vomited bile, and had pain over the region of the liver, the eyes were yellow and bloodshot the tongue was dry and furred. There was very little cough or expectoration. In this case the fall of temperature was rapid, and by the fourth day of the attack it was subnormal, and in a day or two the patient was about well. It may therefore probably be considered as proved that Mrs. F—— suffered from a severe attack of influenza, with slight pneumonic consolidation. The cases, however, are simple and ordinary. It is to the bacteriological examination of the former of them that this note is intended to call attention. The specimen of sputum spread on the cover glass was stained by Friedländer's process after treatment with 1-per-cent. acetic acid solution,[2] and examined after mounting in balsam. Micrococci were found single, in pairs, or in fours, and in some places the diplococci were arranged in chains. With the highest power with which they were examined (× 1500 diameters), a capsule could not be with certainty detected, but the members of the diplococci were united by some kind of an envelope, and in places a faintly stained substance could be detected around single micrococci. There were some smaller micrococci to be detected which might perhaps be young forms. At any

[2] Compare case of M.A.S., THE LANCET, vol. i., 1889, p. 1.

[1] THE LANCET, vol. i. 1890, pp. 211, 219, 262, 380.

[2] Hamilton: Text-book of Pathology, vol. i., p. 138.

rate, on cultivation the pneumococcus easily vanquished any competing organisms, and the cultures, examined microscopically, showed only one micrococcus single and in pairs, which appeared smaller than that in the sputum, but on measurement was found to be about the same size—viz., about $\frac{1}{12500}$ of an inch.[3] No capsule could be detected in the cultivated pneumococci, agreeing thus with all observations on the subject.

The cultivations were made in peptonised gelatine from some of the same sputum as was stained. The first cultivation resulted in five days at the ordinary room temperature in the formation of a flattened cushion-shaped colony at the point of entrance of the inoculated needle, and a detached rod-shaped cultivation along the track of the needle. These were the head and stem of the nail-shaped culture of the pneumococcus, as was proved by making second cultures from the head and stem separately when both developed the typical nail shape. Plate cultures in gelatine gave circular slightly liquefying greyish colonies. Of course no inoculation experiments on animals could be attempted. The evidence from this one case, small as it is, is in favour of the results of Dr. Jolles. If it be objected that the microbe cultivated came from the mouth, in which the pneumococcus has been found in healthy persons,[4] it may be replied that this seems to be disproved by the fact that no separating culture on plates was needed to obtain a pure cultivation of the germ. A sterilised needle coated with the sputum was plunged into the gelatine peptone in a tube, and a pure cultivation resulted, showing that the pneumococcus was at any rate in greatly preponderating quantity in the sputum, and could not therefore have been derived from the mouth. As to the question of the causal relation of this microbe to influenza, nothing can be said at present, and a single case does not throw much light on the question. There would, however, be nothing very remarkable in this, if it should be a fact. The pneumococcus of Friedländer has been discovered in ordinary coryza, and in ozæna,[5] and a very similar microbe in the contagious coryza of horses;[6] it has also been found in otitis media,[7] and in epidemic cerebro-spinal meningitis.[8] Influenza, in the popular opinion, is infectious coryza, though in the present epidemic the coryza is frequently absent. Many cases have had the middle ear inflamed, either during or after the attack, and nervous symptoms pointing to implication of the cerebro-spinal centres (fronto-occipital head, paresis of legs and arms) have been frequently reported. These, to say nothing of the pneumonic and peri- and endo-cardial complications, point to the cause of the disease being a germ capable of affecting widely separated and physiologically different tissues, and such a germ is the pneumococcus of Friedländer. The epidemic has spread, also, to animals,[9] and it has been seen that the germ of coryza in horses is probably the same microbe. It will, therefore, be no very surprising thing if further research shows that influenza, as well as various other ills, are to be laid at the door of this widely distributed micrococcus.

Hull.

OBSERVATIONS ON THE TREATMENT OF THE INSANE.

BY EDWIN GOODALL, M.D. LOND., B.S., M.R.C.P.

WE can still catch the echo of the clear and confident peal which ushered in the new medical year, and in our musings deem its note of hope more or less justified by the progress of the past. "Puer natus est nobis" is the cry of each particular "ology": that the offspring may fulfil its early promise—the wish of sympathetic onlookers. Ere the din of universal congratulation dies away, we may with seemliness inquire into the case of mental pathology. All is by no means still with this branch of medicine, for the air is full of the sounds of stirring, and rumours indicating a departure from an attitude still too expectant. Asylums, at best, must remain in large measure mere "places of refuge," and a considerable portion of their inmates will interest the philanthropist rather than the medical man. But apart from these irreparably damaged ones, who can merely be tended until such time as it pleases Nature to remove them, what are the prospects of those not yet beyond hope of cure? what is "psychological medicine" doing, and what does it propose to do for these cases? In a broad survey of the inmates of an asylum we recognise the three classes of the depressed, the deluded, and the excited. It may in general be said (with reservation of an instance here and there as an exception) that treatment of these cases consists in the adoption of measures adapted to the prevention of mishap to the patient and his neighbours until a change occurs. As regards the asylum dispensary department, its *rôle* is the alleviation of passing bodily ailments. One class of drugs must, however, be excepted—the sedative, in speaking of which one appears at least to be standing on sure ground, to be grasping an instrument potent for good, the use of which is justified and directed by experience. The directions, nevertheless, are by no means explicit, and the value of the agent is uncertain. In large institutions a sedative is not infrequently given with the object of removing the discomfort of the recipient's neighbours. It is, in fact, the price of peace; and in ordering it an excellent general principle is subscribed to, the interests of the individual being engulphed in those of the community. It is not, of course, intended to decry the temperate and judicious use of sedatives, but merely to point out that, as regards the patient himself, the administration might well be more purposeful. We have to do, in fact, with cases in which the remedy is often worse than the disease; and there is occasion to observe, in course of treatment, the efficacy of natural means in securing satisfactory rest. As in ordinary life, so amongst the insane; insomnia is often best combated by exercise and food, and porter may well replace paraldehyde. Leaving restraint by drugs, we may, in passing, refer to mechanical restraint, the employment of which some would fain stamp as heretical. Heresies, however, are tenacious of life, and this particular one forms no exception to the rule, being lusty, and likely to thrive. Restraint, disavowed in public, is yet practised in private, though under a gentler denomination, and, perhaps, in more presentable guise. We stand at present in terror of a name; but alienist fashions, like others, change, and when the heterodoxy of to-day to-morrow becomes orthodoxy, doubtless the proscribed term will rise unchecked to our lips, and the covert usage find an honest place in our practice.

Although in asylums attention is directed in the main to the prevention of unfortunate mishaps, certain measures are also taken with the object of promoting a return to health. Amongst these are suitable work, when possible, and exercise, which at times must needs be enforced. Massage might with advantage be practised with greater frequency in certain cases—for instance, in the melancholic, with physical weakness and loss of flesh and appetite. Electricity is in use, but is worthy of more careful study, which would furnish us with further information as to its definite object and proper application. Baths also, shower and warm, are deserving of more attention than they receive; the continuous warm bath, as used at Bethlem Hospital, is often productive of gratifying results in cases of excitement and delusion. A very considerable item in the programme of treatment—the social—scarcely needs more than mention, the benefit resulting from entertainments of various kinds being well known. The system of convalescent homes would seem to be in need of development at many of our asylums, which would, like the hospitals, be grateful for benefactors in this direction.

Leaving now these well-known (though in many instances little practised) methods of treatment, reference may be made to hypnotism, which is in need of further trial amongst the insane, though it is true that the attempts hitherto made in this country have not resulted in encouraging success. In France, M. Auguste Voisin continues to have good results; he reports in a recent number of the *Revue de l'Hypnotisme* a case of pronounced melancholia with refusal of food, in which a cure was obtained after two *séances*, all treatment having failed. We seem to have here an ideal form of treatment, destined, it may be, like other ideals, never to be realised. Could we but cast a glamour over the patient, exorcise the merciless voices holding dominion over him, instil into him new beliefs, fresh hope, whilst thus under our spell—could we claim so great a conquest, our share of good fortune would exceed the common lot of humanity. The attempt

[3] Slightly smaller than the size given by Klein, ·001 mm. ($\frac{1}{12500}$ = ·00077 mm.). Micro-organisms and Disease, third edition, p. 73.

[4] Netter: Bulletin Médical, May, 1887.

[5] Hajek: Berlin. Klin. Woch., Aug. 13th, 1888.

[6] Poels: Fortschritte der Med., i., 1888.

[7] Netter: Ann. de Méd. de l'Oreille, Oct. 1888.

[8] Foa: Giorn. della R. Accad. de Med. de Torino, 1886.

[9] A good report of a case in a horse is given in the English Mechanic, Jan. 24th, 1890.

to cure a fully developed malady is admirable; the attempt to arrest disorder in the nascent stage, better still; but best of all is prophylaxis. This being so, we cannot but welcome all projects which aim at facilitating the study of the early symptoms of insanity by medical men, and the procuration of advice as early as possible by the masses. The establishment of a hospital for acute and recent cases in town, and the adoption of an out-patient system at a prominent county asylum, are projects with such aims; and the outcome of these enterprises will be awaited with much interest. By inquiries of this nature, if by any, shall we be enabled to distinguish causes from early symptoms and be guided to the discovery of the real occasion of a disorder. In conclusion, reference may be made to the growing encouragement of pathological research in asylums, as affording further token of the progress of the times. Assuredly, therefore, we may enter afresh upon the study of psychiatry under the quickening influence of hope, leaving behind the rust, begotten of over-much rest in the past, and welcoming the signs of activity in the future.

Sheffield.

ON THE

ACTION OF THE POSITIVE POLE OF THE CONSTANT GALVANIC CURRENT UPON MICROBES, AND UPON THE BACTERIA OF CHARBON ESPECIALLY.[1]

BY DRS. APOSTOLI AND LAGUERRIÈRE.

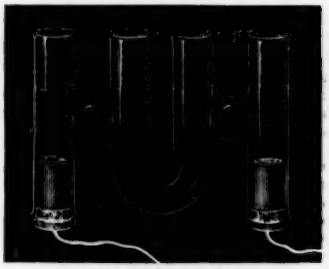
(*Translated from the MS. by* Dr. HORATIO R. BIGELOW.)

THE antiseptic and germicidal action of the constant galvanic current described by one of us in 1886[2] has been the object of our common researches for two years. In a note presented to the Academy of Sciences, Aug. 12th, 1889, we stated the result of our experiments made by placing both poles in the test tube containing the culture bouillons, and at a slight distance the one from the other. All of these experiments were made upon after-cultivations, and followed by animal vaccination (rabbits and snakes). Our first and chief conclusions at that time were: 1. The action of the constant galvanic current upon cultures is in direct proportion to its strength measured in milliampères. 2. Other things being equal for the same intensity, the question of the duration of the application in time is of no value, the intensity of the current being the chief factor. 3. A current of 300 milliampères or more applied for five minutes always kills the bacteria of charbon. Cultivations made with the culture so treated remained sterile, and inoculation of a snake developed nothing. 4. A current of 200–250 milliampères applied during five minutes does not always and surely destroy the virulence. Some snakes still died, but more slowly than those vaccinated with the same culture before subjected to the action of the current. 5. A current of 100 milliampères or less, even after an application of thirty minutes, does not destroy the virulence; it produces attenuation, which augments with the intensity of the current. Snakes inoculated died one or two days later than the others. Since this time we have found out that these effects are independent of the thermic action which accompanies electrolysis, and we have studied the isolated influence of the poles and of the inter-polar portion of the circuit.

The complementary conclusions which we have reached are: 1. By suppressing the calorific effects of the current we can obtain destruction and attenuation of the germ vitality. 2. The positive pole alone kills or attenuates pathological organisms over which inter-polar action or the action of the negative pole have no control. 3. The antiseptic action of the positive pole (in the midst of a distinct culture entirely separated from the negative pole) exercises itself even with smaller doses than in the first experiment (where the two poles were near each other, attenuating their reciprocal action).

The positive pole does not kill with 50 milliampères during a period of application varying from five to thirty minutes; but the attenuation commences and increases progressively, to be constant, during the first five minutes between 100 and 150 milliampères. The general conclusion to be drawn from our experiments is that the continuous current of medical dose (from 50 to 300 milliampères) has no action, *sui generis*, upon germ cultures in a homogeneous medium, and that the unique action of the positive pole is due to the disengagement of acids and of oxygen, as we shall show in another communication.

The instrument made use of in our experiments is shown in the figure. The axis of the tube has a length of 25 centi-



metres, measured from the positive pole to the negative. The section of the tube is six centimetres; there are two strictures of 2 centimetres in length each, and about 5 square centimetres in section. The total resistance of the tube when in order is equal to that of a rectilinear tube 25 centimetres long and 5·5 square centimetres across.

[1] Read before the Academy of Sciences, Paris, April 28th, 1890.

[2] Apostoli: Treatment of Endometritis by Intra-uterine Chemical Galvano-caustic, pp. 38 and 50.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ERUPTIONS AND INFLUENZA.

BY E. D. MAPOTHER, M.D., F.R.C.S.I.

OBSERVERS have described several rashes which have appeared during the course of influenza, but not one of them is an essential feature of the disease, all being results of its multiform pathogenic influences or of any strongly marked diathesis in the patient. I have noticed that the great debility during convalescence has caused, when the subjects were eczematous, the usual lymphatic exudation to become purulent, or has predisposed to acute attacks of pustular eczema, which have been very frequent of late. Tonic treatment for a long period was generally needed. One exceptional case in which, under local measures, improvement occurred very rapidly, may be noteworthy. The patient, having an urgent professional engagement two days later, ardently desired that the disfiguring crusts of dried pus on the face and neck should be removed and not renewed. For the rest of that day the crusts were frequently soaked with hot solution of soft soap, and at night were covered with wet lint and oiled silk. They came off easily in the morning, and during the day their sites were four times sponged with bichloride of mercury solution (1 in 1000). Only slight redness remained, and no eruption or exudation reappeared. In chronic cases the ammoniated mercury ointment, diluted with two parts of lanoline ointment, was found effectual, the pyogenic cocci being continuously destroyed.

Cavendish-square, W.

OXYGEN GAS IN PNEUMONIA.

BY JOHN CHAMBERS, M.D. Q.U.I.

THE large number of deaths from pneumonia and its complications in the early part of the present year suggests to me the making of a few remarks as to the great usefulness of the adminstration of oxygen gas in certain severe cases

of pneumonia. It was my fortune during the early months of last year, as a practising physician in the United States, to meet with many cases of this disease, occurring chiefly in adults and men of middle age. It is needless to say that several of these cases were attended by symptoms of extreme danger. These symptoms in the cases observed were due directly to the deficient aeration of the blood. They were marked by difficulty of breathing, together with weakness of the heart's action. The faulty aeration is recognised almost at its onset by the livid hue of the lips, of the ears, and the finger nails. This condition is well known to every physician, and, as it is the token of immediate danger to the patient, it is important that the best measures be taken to overcome, if possible, the difficulty. In pneumonic cases in young and old, presenting symptoms of deficient blood aeration, the inhalation of oxygen gas has, in my hands, proved to be a remedy of remarkable power. Under its use the lips recover their redness, the breathing becomes easy, and the toneless heart is strengthened in its action.

As to the method of using the gas, a few words may be added. A supply of pure oxygen gas can be easily obtained from the laboratory of a chemist. It is collected in a receiver, and can be conveyed a considerable distance without loss of gas. In the immediate use it is better to fill a rubber bag from the tank than to give the gas directly to the patient. The rubber bag should have a capacity of one or two gallons, and be provided with a stopcock at one end. To this a short rubber tube ending in a mouth-piece can be readily attached. The mouth-piece is applied over the mouth of the patient, the valve of the bag is turned, and the whole or any portion of the gas in the bag can be inhaled at a single dose. As the gas is heavier than air, its escape from the bag will be facilitated by holding this above the level of the mouth, and slight pressure upon the bag will still further assist in the inhalation. From half a gallon to a gallon of gas can be given every half hour with perfect safety, and with great relief to the sufferer's symptoms. I have continued such doses for four days and nights, with the most satisfactory results. Life has certainly been saved in many cases when it has seemed that death was inevitable. When cardiac weakness is urgent, an excellent and safe tonic is found in sulphate of strychnia, which may be given in doses of one-eightieth of a grain every four or six hours, until a decided change in the condition of the pulse is manifest. When this occurs the strychnia is omitted, but may be of use again in a day or two if the pulse should fail. The relief in desperate cases, where asphyxia is threatened, is so marked that it is astonishing physicians have not more generally used this simple remedy. The use of oxygen gas imposes a great deal of labour on physicians and nurses. With a little training, however, the nurse soon learns to give the oxygen, thereby relieving the physician. Two nurses should be employed—one for the day and one for the night.

Paris.

A CASE OF ACUTE INTESTINAL OBSTRUCTION FROM IMPACTED GALL-STONE, IN A PATIENT AGED SEVENTY-SEVEN; RECOVERY.

BY CHARLES H. MILES, L.R.C.P. LOND., &c.

MRS. B——, aged seventy-seven, was taken ill on March 4th with severe pain in the right iliac region, just over the cæcum. After the pain had persisted with more or less severity for upwards of two hours vomiting commenced. The vomiting at first consisted of bile, but rapidly became stercoraceous; everything taken, even the smallest quantity of fluid, was immediately rejected. On seeing the patient two days after the commencement of her illness, I found her in a state of extreme collapse, with feeble fluttering pulse, dry brown tongue, and complaining of great thirst. On inquiry I found that the bowels had not been moved for some days, nor had any flatus been passed per anum. On examining the abdomen, I found it moderately distended with flatus and tympanitic, with extreme tenderness in the right iliac fossa; there was also a soft, ill-defined swelling in the left iliac fossa. I diagnosed the case as one of intestinal obstruction, and from the history, symptoms, sex, and age of the patient, together with the result of my examination, I thought possibly the obstruction might result from hardened fæces or impacted gall-stone I therefore carefully manipulated the abdomen, which the patient afterwards said gave her great relief and seemed to move something, and the severity of the symptoms diminished soon afterwards. I ordered hot fomentations to be applied to the abdomen, gave opium internally, which she now kept down, and soon after an enema was given, which brought away a quantity of hardened fæces, amongst which was a single large gall-stone; in colour and shape it resembled an early potato, measuring $1\frac{3}{4}$ in. in its longest diameter by $1\frac{1}{2}$ in. in its shortest diameter; its circumference measured 3 in., and its weight was just half an ounce, and adherent to its surface was a portion of mucous membrane, the size of a shilling, covered with recent blood. After the bowels had been relieved, the patient rallied, and the sickness and pain ceased. She was given a little beef-tea and brandy, and the opium continued internally. For nearly a fortnight she was kept exclusively on a liquid diet, consisting chiefly of beef-tea, arrowroot, raw egg, brandy, with opium internally. She suffered very much at first from diarrhœa and extreme prostration, but ultimately made an excellent recovery, and is now quite comfortable.

Such a large stone must of necessity have ulcerated through from the gall-bladder into the duodenum. It seems strange therefore that such a thing should take place without giving rise to pain or spasm in the epigastric and right hypochondriac region, or to a certain amount of jaundice, neither of which symptoms occurred previously to the onset of the acute illness. The first symptom was probably caused by the stone becoming impacted in the lower end of the ileum. Manipulating the abdomen must have moved it on into the colon, and so gave rise to the amount of relief experienced directly afterwards by the patient.

Stantonbury.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

LONDON HOSPITAL.

UNILOCULAR ABDOMINAL CYST OF LARGE SIZE, APPARENTLY OVARIAN; LAPAROTOMY; CURE.

(Under the care of Mr. RIVINGTON.)

IN the following case the removal of a large abdominal cyst was performed during the early stage of pregnancy, and the operation was followed by abortion five weeks later; but there was a special reason for the expulsion of the uterine contents in the suppuration about the uterus and in the lower abdomen which followed the removal of a very adherent tumour. Several cases of removal of ovarian tumours during pregnancy without any unfavourable result are on record. Stratz,[1] from a study of nineteen cases of pregnancy complicated by ovarian tumours, in fourteen of which ovariotomy was done, came to the conclusion that if this operation is necessary the prognosis is not rendered unfavourable by the fact of gestation. Mundé[2] is of opinion also that, as a rule, the prospect as regards continuance of gestation is favourable when the operation has been performed in the early months of pregnancy. We refer our readers to Mr. Rivington's remarks.

Eliza B——, twenty-seven, married, was admitted into the London Hospital on Aug. 20th, 1889. She had not been well since her last child was born, fifteen months previously. She was regular up to three months ago, when menstruation ceased. Every few days she suffered from pain in her left side. The pain became very severe a week before admission, and she was very sick. Her abdomen was distended. There was absolute dulness over the tumour in front as far down as the pubes, and it did not alter its position when the patient was turned to one side or made to sit up, whilst there was resonance above and in the flanks. A firm elastic mass could be felt per rectum behind the cervix. The

[1] Sajous, 1888, vol. iv., p. 174. [2] Ibid., 1889, vol. ii., p. 30.

patient stated that she was pregnant. Vomiting was incessant on the 24th, but ceased on the 25th. The patient was examined by some of the members of the staff, and the opinion formed was that the case was one of ovarian tumour, and that it was desirable to operate as soon as possible, because the general health was suffering in consequence of it. As the case was diagnosed as ovarian, the tumour felt per rectum was not suspected to be a gravid uterus in an early stage.

On the 27th abdominal section was performed under the carbolic spray. On opening the abdomen, it was found that extensive adhesions existed between the tumour and the parietes and viscera. Those in front were readily separated, but above and at the sides and behind they were firmer. The peritoneal surface was darkly congested, almost black, and oozing of blood occurred when the adhesions were separated. The tumour having been partly detached in front, a Spencer Wells' trocar was pushed into it, and a considerable quantity of dark-coloured fluid was drawn off; twenty-four ounces were collected, but some was lost; the sp. gr. was 1009, and reaction neutral. After the fluid had been evacuated, the cyst required careful and gentle separation from the intestines and parietal peritoneum. The adhesions bled freely for a time, but the bleeding soon ceased on pressure with sponges. The cyst was thus freed, with the exception of a very slender pedicle, which appeared to consist only of two layers of peritoneum and a vessel looking like a vein between them, and which was connected with the spinal attachment of the mesentery. A single fine ligature sufficed before the cyst was cut away. It was then found that the cavity of the pelvis was quite cut off by adhesions from the general cavity of the abdomen. There was no pouch of Douglas; the fundus of the uterus could be felt easily, but not the ovaries. The peritoneal cavity was carefully sponged out, and all bleeding stopped before the wound was closed and dressed. The lining membrane of the cyst was very vascular. Before the operation the patient had been suffering severely from pain, sickness, and inability to take anything but a little fluid nourishment. She was losing flesh and looked very ill. Her condition now improved, but only for a day or two. Then the temperature ran up, and there were two or three rigors with profuse sweating. The question of reopening the wound was considered, but as there was no definite evidence of the existence of pus on examination of the abdomen, it was not done. As it turned out, however, this would have been the proper course, for some few days later—viz., on Sept. 12th—a large quantity of fetid sanguinolent pus burst through the original incision. This fluid had been masked by tympanitic distension of the intestine. The abdominal cavity was now washed out with boracic lotion, and a glass drainage-tube inserted. After the evacuation the patient perspired less freely. Her condition varied from day to day. There was slight diarrhœa on the 15th, lasting till the 19th, when it stopped, and vomiting occurred. On the 25th she vomited three times in the morning, and a piece of slough came away. On the 27th she was vomiting and perspiring freely. On the 28th she seemed very weak and was sick, but was free from pain. On Oct. 1st the patient aborted; the fœtus was about eight inches long. From this time she made good progress. On the 5th the temperature was normal. On the 11th there was very little discharge from the tube, and on the 16th it was removed, the wound soon closing. Soon afterwards the patient was discharged.

Remarks by Mr. RIVINGTON.—There was nothing to distinguish this case from an ordinary case of unilocular ovarian cyst, and it could not, I think, have been diagnosed before operation. Supposing that it had been, we should then have suspected that the pelvic tumour was physiological. Under any circumstances, I think it would have been proper to remove the cyst, both for prospective convenience, if the patient went her full time, and to relieve the symptoms which depended on its presence. It is not quite certain in what precise position the cyst originated. Probably it commenced beneath the descending layer of the mesentery, and soon became pedunculated, acquiring adhesions as it increased in size. When removed it was attached by the slenderest pedicle, not more than an inch in length, at a point a little above the brim of the true pelvis. I think, therefore, that it may be regarded as having been originally a mesenteric cyst. The history of the case after operation shows that it would have been beneficial if a drainage-tube had been inserted. As all bleeding from the separated adhesions had ceased, and every trace of fluid had been removed from the abdominal cavity, it was considered to be superfluous, especially as the strictest antisepticism had been practised. Some oozing of blood must have occurred after the circulation became more active on recovery from the anæsthetic, and the necrosis of adhesions may have determined the subsequent suppuration. If great care had not been exercised, the intestine, which was vascular, soft, and adherent, would have torn readily. I have already indicated that my first intention, of reopening the abdomen when the rigors had occurred and the temperature ran up, would have been the best course, and the insertion of a drainage-tube at that time, after removing any blood exudation or pus that might have been found, would have shortened the duration of the case. A consultation with one of my colleagues led to my abstention from interference. It was thought that there was not sufficient indication of the presence of any pus or septic fluid in the abdomen.

LAMBETH INFIRMARY.

PUERPERAL ECLAMPSIA, FOLLOWED BY PUERPERAL MANIA; RECOVERY.

(Under the care of Mr. J. V. BLACHFORD.)

THE following case is an example of the successful treatment of eclampsia occurring in a primipara during the early stage of labour, and continuing for some days after the emptying of the uterus of its contents. The fits were of a very severe character, and were followed by coma and later by mania in the second half of the week. The prognosis in these cases is most serious. Spiegelberg[1] places it as high as one in three or four in the mothers and one in two in the children. It is interesting to note the extent of albuminuria, and the complete recovery from the renal condition on which the eclampsia depended. The effect of venesection was such as might be expected from the statements of some of the authorities[2] as to its usefulness in such states of the kidneys. The other important points in the treatment are the rapid artificial completion of the labour and the use of sedatives, especially chloral hydrate.

S. P——, aged seventeen, a strong, well-nourished, healthy girl, was admitted as suffering from epilepsy on Nov. 2nd, 1889, and had many continuous epileptiform fits from the time of admission (5 P.M.) to midnight. Face livid; internal strabismus of right eye; complete loss of consciousness during a fit, which lasted from half a minute to two minutes and a half; between the fits a semi-comatose condition, in which she seemed to feel pain, but did not speak or notice anyone; pulse 130. A solution of twenty grains of chloral hydrate and twenty grains of bromide of potassium was given per rectum without any effect. The patient was found to be in labour soon after admission, and by midnight had advanced to the second stage, vertex presentation. The forceps were put on without any trouble, and a living male child extracted. The placenta was expressed within twenty minutes; there was slight hæmorrhage, but not to an unusual amount. The fits became less frequent. The enema of hydrate of chloral was not retained.

Nov. 3rd.—The patient is comatose; tongue swollen and protruding; urine loaded with albumen. Venesection to 20 oz. was performed. Fits occur at intervals.

4th.—The fits continue at intervals, and she is still comatose. Two minims of croton oil were placed at the back of the tongue at 12.30 P.M. The bowels were freely relieved within an hour; soon after this the fits became less frequent and the pulse a little stronger.

5th.—10 A.M: The fits ceased. 1 P.M.: Has regained consciousness, and is maniacal. She does not understand anything said to her, refuses food, kicks at everybody going near her, and is incoherent.

6th.—Still incoherent, but not so noisy. She does not appear to understand anything, but takes food.

7th.—Much improved in bodily condition. Quieter, but does not understand what is said to her.

8th.—Quieter; trying to get out of bed; incoherent.

9th.—Quite rational; does not remember anything.

29th.—Patient continued improving up to this date, when

[1] Vol. ii., p. 218.

[2] Spiegelberg, loc. cit. Lovejoy and Allen (Boston Med. and Surg. Jour., 1887) did not lose one out of fifteen cases in which it was employed.

she suddenly cried out about being burnt; talked incoherently about figures, of men and women, and about being spell bound.

30th.—Cries on being spoken to; appears in mental distress.

Dec. 3rd.—Cries on being spoken to, but rather better; from this date patient steadily improved, and was discharged well on January 7th, 1890.

The urine contained albumen on Nov. 6th, but it had quite disappeared on the 24th of that month, and when she left the infirmary the urine was apparently normal.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

TWO CASES OF TUBERCULAR DISEASE OF THE URINARY AND OF THE GENITO-URINARY TRACTS; REMARKS.

IN the Mirror of Hospital Practice in our issue of last week (p. 1070) we published the notes of a case of removal of a scrofulous kidney by Mr. Whipple on the failure of other methods of treatment, in which recovery, apparently perfect, followed the operation. This week we publish two other examples of tubercular disease—in one limited to the kidney, in the other also involving other parts of the urinary as well as the generative system. The first case is interesting, as the disease appeared to be limited to the kidney drained; the other kidney was healthy, and there were no symptoms of disease in other parts. The second is an instance of extensive tubercular affection of the genito-urinary tract, of which but slight evidence existed during life. The question of local treatment in tubercular disease of the testis is an important one, and the notes of this case prove the difficulty sometimes encountered in diagnosing the extent to which other organs are affected, for if the disease is advanced in other parts few surgeons would resort to operation of any severity. For the following account we are indebted to Mr. W. Gifford Nash, house surgeon.

CASE 1. *Scrofulous disease of left kidney; nephrotomy; death.* (Under the care of Mr. Connell Whipple.)—W. F——, a groom, aged twenty-four, was sent up by Mr. Thompson of Launceston on March 17th, 1890, with a history of passing gravel. The patient stated that eighteen months previously he began to suffer from passage of gravel, frequency of micturition, and pain in both testicles and penis during micturition. He used to pass gravel two or three times a week until within three months, when it became less frequent. Three weeks ago a fragment about the size of a pea lodged in the urethra, and was extracted by Mr. Thompson. The fragment consisted of uric acid. The frequency of micturition was worst between six and twelve months ago, when he passed urine every half-hour. The right testicle swelled a year ago, and the left six months afterwards. He first passed blood three months ago, but this has diminished. At times the blood has been clotted, the clots being flattened. For three months he has suffered from cold shivers, feverishness, sweating at night, and has lost twenty pounds in weight during that time. He has also had more aching pain in the left loin, which was worse when walking or breathing deeply. There was a history of phthisis, two of his paternal aunts and a sister having died from it.

On admission the patient was a pale emaciated young man, complaining of frequency of micturition and weakness. He had no pain, and was passing urine about three times each night, and every two or three hours by day. The tongue was clean. Pulse 120, small and weak. There was some hardness of the left epididymis, the vas deferens was thickened, and the body of the testis soft and wasted. The right testicle was small and soft. The right kidney could be felt below the costal margin. It was neither tender nor movable. In the left loin was a firm, tender swelling, extending upwards beneath the costal margin and downwards two inches below the umbilicus. It extended forwards and inwards nearly to the middle line and did not move with respiration. There was distinct fulness in the left loin behind compared with the right loin. There was absolute dulness in the flank, but resonance in front of the swelling. The lungs did not present any signs of tubercular disease, and there was no cough or expectoration. On the right side he had three nipples, one each over the fourth, sixth, and eighth ribs, the middle one having an areola, but the lowest being simply a nipple. The urine was acid, sp. gr. 1022. Under the microscope were seen pus and blood-cells and a few oxalate of lime crystals. There was merely a slight sediment of pus. On March 18th and 19th the evening temperature was 98·8°. On the 20th the urine contained one-quarter pus, and on the 22nd one-tenth. On the 22nd the morning temperature was 103·6°; in the evening it fell to 98°. On the 23rd it was 101·8° in the morning and 99·2° in the evening. On the 24th it was 100·6° in the morning and 100° in the evening. On the 25th methylene was given, and an incision was made in the left loin parallel to the last rib. The pale capsule of a much enlarged kidney was exposed and incised, giving exit to three or four ounces of thick yellow pus. The finger was introduced and several other abscess cavities opened. No stone was felt. It was evidently a scrofulous kidney, and it was decided to let it drain and remove it when it should have contracted. A large drainage-tube was inserted after the cavity had been irrigated. On the 26th the morning temperature was 103°. Since the operation the patient had passed urine every two hours, altogether forty-eight ounces in twenty-four hours. This contained very little pus, and only a trace of blood. The wound was dressed and irrigated. No urine came through the wound. On the 27th the temperature was 101°, and there was more pus in the urine. On the 28th foul-smelling pus escaped from the wound in the kidney, but no urine. The swelling in the abdomen was not smaller than before the operation. In the evening he had a rigor, with temperature 103°. On March 30th the patient was not so well; he was weak and feverish; temperature 103·6°; pulse 150. He had pain in the abdomen and was sweating profusely. On the 31st he had general peritonitis. The urine was scanty and loaded with pus and blood; the discharge from the wound was very foul. At 7 P.M. death occurred from peritonitis, apparently septicæmic. On April 1st both kidneys were removed through the loins. The right kidney appeared normal in every respect. The left kidney was much enlarged, about twice the natural size, and bulging in several places from the presence of abscesses. On section, the capsule was much thickened, intimately adherent to, and indistinguishable from, the altered kidney tissue. The hilum was filled with fibro-fatty tissue. Scarcely a trace of kidney tissue could be seen; it consisted of a mass of abscesses with ragged walls, containing pus and caseous material. The tissue between the abscesses was pale and fibrous in appearance. Around the incision the kidney tissue was separated from the capsule and in a gangrenous condition. No stone was found.

Remarks.—The diagnosis of this case was difficult. It lay between renal calculus, which had produced pyonephrosis, primary tubercular disease of the kidney, and tubercular disease, produced by irritation of calculi. The latter seemed most probable. The lumbar aching, vesical irritability, swelling of testicles, presence of pus and blood in urine, and lumbar swelling might have pointed to calculous disease, but the fever, sweating, and rapid emaciation in a young man with a phthisical family history were in favour of tubercular disease. With regard to the passage of uric-acid gravel, Mr. Henry Morris, in his book on "The Surgical Diseases of the Kidney," p. 456, says: "If with these symptoms (hæmaturia, albuminuria, lumbar pain, vesical irritability, pain in testis, and pus in urine) the patient occasionally passes gravel, or minute calculi, or fragments of calculous matter, the diagnosis (of renal calculus) becomes conclusive." Mr. Whipple regretted that nephrectomy was not performed, as the abscesses were so numerous that satisfactory drainage could not take place, and, as was proved post mortem, the opposite kidney was healthy.

CASE 2. *Tubercular disease of the genito-urinary tract; tubercular disease of epididymis; castration; pelvic abscess; death.* (Under the care of Mr. William Square.)—J. C——, aged forty, a carpenter, was admitted on Dec. 21st, 1889, complaining of painful and frequent micturition and swelling of the left testicle. He stated that the left testicle had been swollen for seven years, but had not given any trouble until five weeks ago, when a small abscess formed and burst. Eighteen months ago he passed blood-clots in his urine, which also began to deposit a white sediment. A year ago he began to pass his urine too frequently, the act occurring every two or three hours by day and night. After finishing voiding urine he still felt

as if he could pass more. He was a well-nourished, large man. There was a hard nodular enlargement of the left epididymis, over which the skin was adherent, and at one spot towards the back of the scrotum there was a small sinus. The corresponding vas deferens was much enlarged. The vesiculæ seminales could not be felt to be enlarged. The urine was acid, and contained a very little pus and a few oxalate of lime crystals. On Jan. 1st, 1890, he complained of sciatica on the right side. The kidneys could not be felt to be enlarged. He was suffering from night sweats. There was nothing abnormal with lungs or heart. He was sounded, and nothing abnormal found.

On Jan. 3rd methylene was given, and the left testicle was removed. It contained a caseous abscess, which communicated by a sinus with the opening at the back of the scrotum. In three days he had a cellulitis spreading over the front of the abdomen into the left loin. On Jan. 17th a tympanitic abscess in the anterior abdominal wall was opened. After this the abscess continued to discharge, notwithstanding counter-openings and frequent irrigation. The man gradually got worse, and died on April 2nd.

Necropsy.—A large abscess existed in the left iliac fossa, both superficial and deep to the ilio-psoas muscle. The left kidney was much enlarged and lardaceous. The right kidney was enormously enlarged, and about four or five times its natural size. It was a splendid specimen of a tubercular kidney, being simply a mass of abscesses. The ureter was thickened. The bladder contained a thickened ulcer, occupying the region of the trigone. The prostate contained an abscess holding about two drachms of pus. The vesiculæ seminales were thickened. Only the abdomen was opened.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Tubercular Strictures of Colon.—Volvulus of Small Intestine.—Osseous Lesions in Scurvy.—Cancer of Testis.—Psorospermiæ.—Spontaneous Fracture of Renal Calculus.—Cystic Disease of Breast, with Cancer.

AN ordinary meeting of this Society, the last for the present session, was held on May 20th, the President, Dr. Dickinson, in the chair.

Reports of the Morbid Growths Committee were read: (1) On Mr. Robinson's case of Epithelioma of the Lower Eyelid; (2) on Mr. Croft's case of Popliteal Aneurysm and Sarcoma; (3) on Dr. West's case of Primary Carcinoma of Omentum; (4) on Mr. Sheild's case of Tumour of Muscle; (5) on Mr. Robinson's case of Duct Cancer of Male Breast; (6) on Mr. Bowlby's case of Coccygeal Tumour.

Dr. ROLLESTON showed a specimen of Multiple Tubercular Strictures of the Colon. There were three marked but not extreme strictures in the large intestine, the first at the beginning of the ascending colon, the second at the hepatic flexure, and the third in the sigmoid flexure. In the recent condition the surface of the bowel in the region of the strictures was of a darkish purple colour, with small white spots embedded in the firm cicatricial tissue which had replaced the epithelium. The strictures were annular, fairly sharply limited, extending from half to three-quarters of an inch in the long axis of the bowel. There was a little local peritonitis but no distinct tubercles visible on the outer surface of the colon. There were a few enlarged lymphatic glands attached to the outside of the colon. The mucous coat between the strictures was ulcerated. There was no dilatation of the colon behind the strictures. Microscopic examination showed the presence of numerous giant cells in the mucous and submucous coat, with extensive small cell infiltration. There was no ulceration in the small intestine. There was obsolete tubercle at the apex of the right lung, and empyema on the left side. The patient died with lardaceous disease due to the prolonged suppuration set up by caries of the fourth and fifth lumbar and first sacral vertebræ. There was a discharging psoas abscess on the left side, and psoas and iliac abscesses on the right side. There was diarrhœa during life, but no symptom suggesting stenosis of the bowel. That there was no obstruction was shown by the condition of the colon, which, though somewhat collapsed distally, was not dilated above the strictures. It was possible that the lardaceous disease, by keeping the fæces liquid, prevented any accumulation.—Mr. HARRISON CRIPPS thought this case should be described as stricture occurring in a tuberculous subject, rather than as one of tuberculous strictures. The actual structure of the stricture was usually fibrous, and the fibrous tissue infiltrated the muscular rather than the submucous coat. The primary cause, no doubt, was ulceration, but any kind of ulceration would produce a stricture like that shown; the thickening affected the whole lumen, and he believed it to be the fibrous degeneration of a muscular hypertrophy. This degeneration of hypertrophied muscle was seen in other situations—e.g., in the thigh muscles in connexion with knee-joint disease.—Dr. HANDFORD referred to a somewhat similar specimen he showed last year, in which there were three strictures situated in the rectum, descending colon, and small intestine respectively. In these specimens the submucous coat was more thickened than the muscular, and under the microscope caseation with giant cells was present, though no bacilli could be found. The lungs contained breaking-down tubercular masses.—Mr. H. H. TAYLOR thought that tubercular strictures were rare, and held that cicatricial contraction of tubercular ulcers was far from common.

Dr. ROLLESTON also exhibited a Volvulus of the Ileum, five inches and a quarter from the cæcum. The following abnormal arrangement of the cæcum and the lower end of the ileum appeared to have been instrumental in the production of this condition. The cæcum had not descended into the right iliac fossa, but lay over the right kidney; it was of the fœtal type, the vermiform appendix arising from the apex of the cæcum, and the pouches on each side of the anterior longitudinal muscular band being equal in size. The lower five inches of the ileum had no mesentery, and the gut passed behind the peritoneum, through the iliac fossa, to reach the cæcum. Where the ileum, tied to the back of the abdomen, passed into the free ileum provided with a mesentery there was a sharp twist of the bowel. Above this point the bowel was distended and inflamed; while below the gut was greatly contracted and quite pale. The point at which the volvulus had occurred was at the sacro-iliac synchondrosis. The specimen was taken from a man aged fifty-eight, who died from intestinal obstruction in St. George's Hospital.

Dr. COLCOTT FOX presented the long bones of the lower extremities and a humerus from a case of Scurvy occurring in a boy aged thirteen years, who had been in the Victoria Hospital for Children on several occasions, and at last died rather suddenly. The illnesses were always of a similar description, and the first one recorded, and said to be rheumatic fever, occurred in 1884. Each time the boy was admitted he was very dirty and neglected, and complained of a gradual onset of languor and listlessness, pains, and sometimes swellings in the joints, a slightly raised temperature, intense tenderness when being handled, stiffness and contraction of the hips, knees, and ankles, sometimes spongy gums, on one occasion a hæmatoma of the scalp, and a progressive atrophy of the muscles, and especially of the long bones of the lower and to some extent of the upper extremities. The boy lived on bread-and-butter and occasionally a little gravy. He never ate vegetables or meat. The post-mortem examination disclosed extreme atrophy of the fibulæ, tibiæ, femora, and to a less extent of the bones of the upper extremity; wasting of the muscles; circumscribed scanty hæmorrhages beneath the periosteum of these bones; a few clots between the left iliacus and the periosteum of the ilium and under the pericranium; some small ecchymoses beneath the pleura at the back of the thorax; separation of the lower epiphyses of the tibiæ, and loosening of the upper ones of the femora. The other organs did not present any lesions of interest. These specimens were brought forward first to illustrate the extreme atrophy of bones brought about by recurrent attacks of scurvy; secondly, to illustrate the connecting links between the lesions seen in adults and in infants. The clinical history was also very interesting. During life the case was very puzzling, owing to the absence of œdema in the legs and of all noticeable hæmorrhagic and fibrinous exudation into the muscles, and of purpura; and the time-honoured mistake was made of confounding it with rheumatism; but the various recurrent symptoms, when considered in connexion with the post-mortem appearances, left little doubt as to the real nature of the case. Dr. Fox

discussed the subperiosteal hæmorrhages, the separation of epiphyses, the stiffening and contraction of the legs, and the atrophy of the long bones, the latter being attributed to the hæmorrhages beneath the periosteum repeated in successive years interfering with the nutrition of the parts.

Dr GRIFFITHS showed a specimen of Carcinoma of the Testicle removed from a man aged forty-four years, who noticed a small hard lump at the lower part of that organ twelve months previously. The hard lump had grown steadily, but more rapidly of late. The cord was not implicated. The lumbar glands were replaced by a large irregular mass of growth, through which the superior vena cava passed. This growth had entered into the lower part of the vein, and had grown in its interior so as to form an elongated pyramidal mass partially filling the vessel; it had also grown into the second part of the duodenum, where it formed a ragged, ulcerated, projecting mass. There were a few secondary growths in the lungs. The growth involving the testicle showed in parts the typical microscopic structure (tubes lined by columnar epithelial cells) of a fibro-cystic growth, and in others that of scirrhus and encephaloid cancer. All the secondary growths—that is, those in the lumbar glands, in the interior of the inferior vena cava, and in the lungs—were in their structure like in every respect to carcinoma. He looked upon this as an example of fibro-cystic disease changed in the course of its growth, through irregular proliferation and multiplication of the epithelial cells lining the tubules, into a true cancer.—Mr. R. WILLIAMS had seen a case of cancer of the uterus which had penetrated the ureter and grown upwards in its lumen in the path of least resistance.

Dr. WALTER SIBLEY read a paper on Psorospermia in relation to Tumour Formation. He said that these protozoa often occurred in the rabbit's liver, giving rise to small tumours which were sometimes mistaken for tubercle. He described and showed specimens from a carp affected with these parasites. There were scattered throughout the muscles several tumours, some as large as marbles, and these consisted entirely of clusters of these organisms enclosed by the muscles which had undergone waxy and fatty degeneration immediately around the deposits. Upon section these tumours were very soft, friable, and granular. He next described a typical specimen from a rabbit's liver, and showed how the presence of these organisms in the bile-ducts produced not only proliferation of the endothelium, but also of the bile-ducts themselves; in fact, gave rise to small adenomatous growths. And he dwelt upon the close similarity of the appearances here met with and specimens he showed from an early stage of adenoma of the human liver, also produced by a proliferation of the bile-ducts. In these two examples two completely different forms of tumours were met with, produced by the coccidia or by their spores, the psorospermiæ. In the fish the tumours consisted of masses of the organisms, in the rabbit the organisms produced but a small part of the tumour, the main bulk being formed by the increase of glandular and fibrous tissue in relation to them, thus somewhat approaching cancer in nature. He next mentioned the chief physical characters by which these bodies could be distinguished from normal cells or pathological structures—the product, for instance, of cell degeneration, in their resistance to the action of acids and alkalies, and most of the common colouring reagents, such as carmine and hæmatoxylin. They might be stained by Weigert's method for staining micro-organisms by a prolonged stay in the aniline dye solution, and a rapid and not complete removal of the colour by aniline oil. If previously to this process the tissue were stained in picro or alum carmine a good contrast stain was produced.—Dr. DELÉPINE said the relation of psorospermiæ to new growths had been amply discussed fifty years ago, especially by Haig.—Dr. SIBLEY replied that Dr. Haig described the affection in rabbits as carcinoma, and he regarded the coccidia as cancer cells.

Mr. BRUCE CLARKE related a case of Spontaneous Fracture of a Renal Calculus, and showed a small fragment which had been broken off. It was rather more than a quarter of an inch in length. The patient from whom it was obtained had had symptoms of renal calculus for several years, and had passed gravel on many occasions. Previously to the passage of the fragment in question the patient had had a most severe attack of renal colic.

Mr. T. W. NUNN related a case of Cystic Disease of the Left Breast, followed by Atrophic Scirrhus of the Right Breast. The patient was a lady who, dying at the age of fifty-seven years, in July, 1889, from atrophic scirrhus of the right breast, had four years previously undergone amputation of the left breast on account of cystic disease of the organ. The patient was under the care of Dr. A. Roberts of Kensington, who furnished the details of the history of the case over a period of ten years or thereabouts. In 1879 Dr. Roberts's attention was called to a small tumour situated not far from the nipple, and from the latter there was an occasional discharge of sanguinolent fluid; beyond this there was little or no inconvenience. The tumour gradually increased and the large size it attained led the patient to consent to its removal. There was no implication of the axillary lymphatics. The tumour was made up mainly of one large cyst, from which, during the operation, at least a pint of brownish fluid gushed out. The wall of the cyst was thin; on the inside of it, at its deep aspect, there projected some few nodules not larger than a hempseed. After removal of the tumour the patient's health improved, and remained in a fair state until July, 1888, three years from the date of the operation, when a general failure of the principal functions of the body commenced. In April, 1889, Dr. Roberts discovered patches of congestion in the lungs, and in examining the chest he became aware of the fact, carefully concealed by the patient hitherto, that the right breast was affected with cancer. In June Mr. Nunn had the opportunity of examining the breast, and found that it had shrunk so as to have almost disappeared, and in a month death took place. No diseased condition whatever was to be seen at the site of the removed left breast. A drawing of a section through one of the nodules above alluded to was shown, and also, under the microscope, sections of the cyst. Mr. Nunn thought that the sections through the tubercle had appearances suspiciously resembling cancer. The question was what was the relation of cystic disease to cancer? were these distinct and separate forms of morbid growth really one disease? Might it be that what was cytic disease at, say, fifty years of age, was at sixty cancer? Every year of life modified the conditions of growth, and thus a common constitutional fault might have various expressions. Reference was made to cases of the association of cystic disease of the breast with cancer, reported by the late Mr. de Morgan and by Mr. Thomas Smith in vols. xix. and xxii. respectively of the Society's Transactions.—Mr. ROGER WILLIAMS had seen many cases of cysts in cancer of the breast. He doubted if the microscopical specimens of the tumour of the left breast really exhibited carcinoma.

[The concluding portion of this report will appear in our next issue.]

HARVEIAN SOCIETY.

Urethral Chancres.—Diphtheria.

AT a meeting held on Thursday, April 17th, Dr. Stephen Mackenzie, Vice-President, in the chair, Mr. J. Ernest Lane read a paper on Urethral Chancres.

Dr. SIDNEY PHILLIPS read a paper on some Dangers connected with the Circulatory Organs in Diphtheria. Many of these conditions were as serious and as frequent causes of death as the affection of the respiratory apparatus, though their symptoms were often less obtrusive. The paper was based on the records of 100 cases of diphtheria which had come under the observation of the writer. Intracardiac thrombosis was an occasional cause of death in diphtheria, especially when it occurred on the right side of the heart. Cases were read showing how suddenly death might result from a clot forming within the right ventricle. Although the clot formation took a certain time, yet no objective symptoms of its presence need of necessity occur, the left ventricle acting, as has been demonstrated, with sufficient power to drive the blood through the systemic and pulmonary vessels without any action of the right side of the heart. The circulation was in consequence kept up until the clot was large enough to prevent any blood flowing through the right ventricle, when death suddenly occurred. Extreme slowness of the pulse occurred in 3 per cent. of the cases of diphtheria. All these cases were accompanied by vomiting, and ended fatally. No treatment appeared of any avail, except possibly strychnia, and the prognosis of cases in which the pulse became greatly slowed was very serious. The same was the case with regard to cases in which the pulse for some days continued to be extremely rapid. These cases were of much more frequent occurrence than those with the slower pulse rate, but where the number of pulse beats exceeded two hundred a minute for two or more days death invariably occurred

in nearly all cases from syncope. The extreme rapidity of the pulse was most frequently found to be present during the first week of the disease, and at a later period even when the other signs were favourable. In many cases, too, it was associated with repeated vomiting; and in others with great drowsiness; but in some cases there were no accompanying symptoms. Irregularity of the pulse was not uncommon, but it was not of unfavourable prognosis. Syncope occurred in twenty-six out of the hundred cases of diphtheria, but these were mostly in severe cases, as the slighter ones were not admitted to hospital. In many cases it was preceded by extreme rapidity or slowing of the pulse or by the approximation of the first and second sounds of the heart, but in some cases it occurred without any warning of this nature. It usually took place very early in the disease, and at any later period it was frequent after the thirtieth day, and when the patient appeared to be progressing favourably or had been discharged from the hospital as cured. The notes of cases illustrating this were read. Dr. Phillips believed that syncope, attended either by rapid or slow cardiac action, could only be attributed in the majority of cases to disturbed innervation with or without other paralyses. The treatment of these cases by cardiac tonics was of little avail, but stimulants and feeding, through a tube if necessary, were insisted upon. Dilatation of both sides of the heart was common in diphtheria, being produced by softening of the muscle fibre. On the right side collapse and congestion of the lung especially led to such dilatation; and if the heart had become dilated before tracheotomy was performed, it then failed to regain its power after the operation. Early tracheotomy was therefore desirable where collapse of the lung appeared to be imminent. On the left side of the heart the softened muscle fibre tended to yield, and this was probably assisted by the increased tension associated with albuminuria or defective renal elimination without albuminuria. Hæmorrhages from the mucous surfaces were not uncommon in diphtheria. In three cases out of the hundred from which Dr. Phillips's observations were derived fatal epistaxis occurred, in four there was bleeding from the thyroid body after tracheotomy, whilst in one case hæmoptysis was associated with purpura. Endocarditis in all probability was never a result of diphtheria, though murmurs might be produced by dilatation or anæmia.—Dr. STEPHEN MACKENZIE commented upon the wonderful nature of diphtheria, on account of the number of parts which it affected, for the eye, the throat, the nervous system, the muscles, and the heart all suffered. He considered the slow pulse of diphtheria to be due to irritation of the vagus, leading to an increase in its inhibitory power over the heart; whilst, conversely, the accelerated pulse was due to paralysis of this nerve. In confirmation of this view, he said that he had recently seen two cases of cancerous stricture of the œsophagus, in each of which the pulse had fallen below 30 per minute. Fatal syncope, especially when it occurred after a slight attack of diphtheria—as was not unfrequently the case—was a most distressing accident. He thought that the dilatation of the ventricles could hardly be due to an increase in the arterial blood-pressure, as this was necessarily only transient; but that it was, perhaps, due to some toxic effect acting directly on the arteries and on the cardiac muscle. He asked Dr. Phillips whether the paralytic symptoms, as they only occurred in the later stages of the disease, might not be due to ptomaines, possibly resulting from a disintegration of the mucosa. — The discussion was continued by Mr. Roger Williams, Dr. Hill, and Dr. Drew.

Treatment of Placenta Prævia.—Uterine Hæmorrhage after the Menopause not depending on Malignant Growths.

A meeting of the Society was held on Thursday, May 1st, Mr. Thomas Bryant, F.R.C.S., President, in the chair.

Dr. ALDERSON read a paper on the Treatment of Placenta Prævia, basing his remarks upon the successful treatment of two cases which occurred in his practice. Both patients were multiparæ, both were over forty years, and in both the placenta was more or less centrally attached, whilst both had suffered from several attacks of bleeding. In both the initial symptom was severe, and sudden flooding commencing without any warning, occurring during sleep, and coming on between the sixth and seventh months of pregnancy. In the first case the patient was a delicate woman in her tenth pregnancy. The labour was terminated after a second attack of flooding, by rupture of the membranes and delivery by the long forceps; there was no bleeding either during or after delivery. Chloroform was administered, but not to complete narcosis, and in both cases so much of the placenta was separated and removed as was within easy reach of the finger. The second case mentioned by the speaker terminated quite naturally upon the fourth day, but in examining the afterbirth, which was much atrophied, thinned, and flattened, it was noticed that a large portion of the uterine surface of the placenta had been removed, as was mentioned, during the early stage of labour. Dr. Alderson said that he had found both ergot and bromide of potash of service in arresting or preventing bleeding in cases of post-partum hæmorrhage, after the flooding had been stopped by the separation or removal of as much of the placenta as could be reached by digital exploration in the manner described and recommended by Dr. Barnes in his work on obstetric operations. It was this modification of Simpson's operation which he had found to be the most successful, and which he had practised in every case where labour had been seriously complicated by post-partum bleeding. This practice had invariably stopped the hæmorrhage, time was gained, and either external version or turning could be employed as might seem appropriate, whilst the partial separation of the placenta did not necessarily cause the death of the child. Dr. Alderson on one occasion removed the entire placenta after an alarming flooding and then turned; a speedy and excellent recovery followed.[1] In such cases puncture of the membranes was usually recommended as a routine treatment, but he thought that this operation might be performed too soon. Plugging the vagina was in Dr. Alderson's opinion objectionable, and he preferred severe flooding to any chance of a concealed hæmorrhage. He applied a binder both before and after labour, and thought it was of especial service in cases of post-partum hæmorrhage.—Dr. AMAND ROUTH thought that perhaps the safest way to treat such cases of placenta prævia as had been described by Dr. Alderson was to turn by the bimanual method without rupturing the membranes. For his own part, he would not have picked off portions of the placenta, but would have freed it from its attachments as far as possible in order to allow the cervix to dilate more readily.—Dr. GRIFFITH said that theoretically the treatment of placenta prævia was easy, but that in practice a number of difficulties always arose which could not be foreseen, and which had to be treated as they occurred. He thought that the proper treatment to adopt in the cases brought forward by Dr. Alderson was to deliver at once. In such cases neither mother nor child benefited by the delay; and whereas in these cases the children were presumably dead, the mother alone had to be considered. He believed that it was a good rule to adhere to, that when there was hæmorrhage with a dilated os, delivery should be effected at once. The really difficult cases, however, to treat were those in which the woman was not in absolute labour and was extremely anxious to have a living child.—Dr. Boxall, Dr. Eastes, and Mr. Frankish joined in the discussion which followed.

Dr. HANDFIELD JONES read a paper in which four cases illustrative of Hæmorrhage from the Vagina in Women who had passed the climacteric were related. In one case lupoid disease attacking the upper portion of the vagina had been present, but had disappeared after the use of the curette and actual cautery. Attention was directed to the characteristics of the disease and to the difficulty which was often experienced in making a differential diagnosis between this form of ulceration and that which was due to tertiary syphilis. The causes of the hæmorrhage in the other cases recorded by Dr. Handfield Jones were "senile endometritis," vaginal ulcerations from pressure of retained pessaries, and pelvic suppuration discharging through the cervical canal.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Cancer of the Breast treated by Electricity.—Unconscious Automatic Actions in Epileptic Fits.

A MEETING of this Society was held on April 11th, H. Campbell Pope, M.D., President, in the chair.

Dr. INGLIS PARSONS read notes of, and remarks on, his first case of Cancer of the Breast treated by Electricity.

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[1] THE LANCET, vol. ii. 1876, page 253.

The growth had been arrested for a year and eight months. The patient, aged thirty-eight, was under treatment for three weeks in August and September, 1888; since then she had not required further treatment. The growth previously to the treatment had been rapid, involving three axillary glands, and causing marked retraction of the nipple. The stroma remained unabsorbed, and formed a complete skeleton of the growth.—Mr. STEPHEN PAGET said that the experience he had of removing cancer of the breast by the knife made him feel convinced that there was no advantage in doing it by electricity. Nervousness on the part of the patient and the dread of the knife were brought forward as excuses for it; but were there not anæsthetics to be counted upon, and was it not better for the patient's sake to remove the growth by one sweeping operation, instead of having to resort to several applications of electricity at intervals, and six months afterwards still to have the tumour there?—Dr. TRAVERS regretted that the patient was not there to be seen. In some thirty cases he had had to deal with removal of tumours by the knife had been as satisfactory as could be wished. He was quite sure that the dread of the knife kept many patients from seeking removal of a tumour until the disease was very far advanced, and it seemed to him that in these cases the new method might be of use in making them come forward earlier.—Mr. JESSETT said his experience was that the application was not free from risk. He had found that each time the patients had complained of much pain afterwards and had shown reluctance to come on the table again. He did not think the eighteen months of Dr. Parsons' case long enough to say the patient was cured.—Mr. KEETLEY had seen two cases in one of the infirmaries following this method of treatment. He did not see that anything could be preferred to the ordinary method of treatment carried out in the hospital. Recoveries were always good, and although recurrence did happen occasionally, yet it was often easy to remove the growth again. He did not understand that the new treatment would cure the cancerous diathesis.—The PRESIDENT and Dr. ECCLES joined in the discussion.—Dr. INGLIS PARSONS said that the amount of electricity used is very much less than that used with the constant current for electrolysis. What he relied upon was the injury produced by a momentary flash.

Dr. COLMAN then read a paper on the Unconscious Automatic Actions occurring at the close of Epileptic Fits. He drew attention to the fact that they occur quite as frequently after the slightest forms of petit mal as after severe epileptic fits. He gave a number of cases illustrating the different kinds of actions which are performed by such patients, and urged the necessity of bearing this occurrence in mind when occasion arises to give evidence as to the responsibility of a person for peculiar acts which he may have committed.—The PRESIDENT said he would like to have heard described some of the more purely automatic actions of patients. He referred to a lady now under his care suffering from hemiplegia, who formally when she yawned used to raise her hand to her mouth, and who now seemed to make an automatic attempt to do the same thing with her paralysed hand.—Mr. LLOYD said he believed that many cases brought to hospital and put down by the residents as cases of hysteria were really cases of what Dr. Colman had been describing.—Dr. DREWITT and Dr. ECCLES made some remarks.—Dr. COLMAN, in reply, said he had not noticed that putting the hand up to the mouth was frequent in the post-epileptic state. He had often observed that the patients micturated repeatedly, so that the act of micturition could not be looked upon as a sign occurring immediately after recovery had taken place.

Dr. CLIPPINGDALE showed a specimen of Aneurysm of the Left Ventricle of the Heart.

PROVIDENT SURGICAL APPLIANCE SOCIETY.—The eighteenth anniversary festival of this Society was held recently at the Hôtel Métropole. About 150 gentlemen were present, Mr. J. Mowlem Burt presiding. The chairman, in proposing the toast, "The Surgical Appliance Society," remarked on the beneficent work of the Society, which was not limited to the metropolis, adding that it was a sad thing to state that one person in ten in this country required surgical appliances, and, in appealing on behalf of the Society to the generosity of those present, he trusted they would bear in mind those facts. Subscriptions were announced to the amount of £1463.

Notices of Books.

Intercolonial Medical Congress of Australasia. Transactions of Second Session, held in Melbourne, Victoria. January, 1889. Melbourne: Stillwell and Co. 1889.—The first Intercolonial Medical Congress took place at Adelaide in August, 1887. Within eighteen months the same body gathered for the second time, on this occasion in Melbourne, and, to judge from the record of its proceedings contained within the bulky volume before us, it must be pronounced to have been an unqualified success. The next meeting is to be at Sydney. The value of such gatherings is unquestioned from whatever point of view they be regarded, and it is especially gratifying to note the scientific and practical zeal with which medicine is being prosecuted in our Australian colonies, of which these Transactions bear ample witness. It would be impossible to notice in anything like detail the various subjects treated of in this volume. Some sections—notably those on Medicine, Surgery, and Hygiene—were more productive than others, and many papers of permanent value and interest were contributed. The president of the Congress was Mr. T. N. Fitzgerald, the various sections being presided over by Dr. W. F. Taylor (Medicine), Dr. E. C. Stirling (Surgery), Dr. H. N. MacLaurin (Hygiene), Dr. Anderson Stuart (Anatomy and Physiology), Dr. W. C. Wilkinson (Pathology), Mr. F. C. Batchelor (Obstetrics and Gynæcology), Dr. M. J. Symons (Eye, Ear, and Throat), Dr. F. N. Manning (Psychology), Baron Sir Ferdinand von Mueller (Pharmacology), Mr. J. P. Ryan (Skin), and Dr. W. Snowball (Diseases of Children). In the section of Medicine a most valuable debate took place on the Etiology of Typhoid Fever, the chief papers being contributed by Messrs. Jas. Robertson, Carstairs, H. B. Allen, and Henderson. There appears to have been general agreement as to the means of propagation of the disease, although Dr. Carstairs laid rather more stress on aerial infection than is usually accepted. The cold-bath treatment of typhoid fever found an able exponent in Dr. F. E. Hare. Several papers on another subject of vital importance to the colonists—viz., phthisis—were also read in this section. Thus, Dr. Colquhoun of Otago brought forward striking statistical evidence in support of the comforting conclusion that the liability to phthisis among Europeans is less in New Zealand than in Europe, whilst he noted the especial vulnerability of the Maoris and half-castes. Mr. Duncan Turner placed in order of suitability for the climatic treatment of phthisis—(1) ocean climate, (2) high altitudes, (3) great inland plains, and (4) marine resorts. Mr. Springthorpe contributed two suggestive and speculative papers, one on the Hepatic Element in Disease, and the other on the Nervous Substratum in Influenza. From his experience of Beri-beri in South Australia, Dr. T. M. Wood inclined to insufficient feeding as its main cause. It is interesting to note a paper by Dr. Bancroft on the Filaria, with which his name is so much associated. Dr. Dougan Bird, in a brief paper, was emphatic about the need for early paracentesis in pleural effusion. There are some interesting cases of cerebral disease recorded by Dr. H. Maudsley, Dr. Colquhoun, and Mr. Springthorpe. In the section of Surgery, the subject of Hydatid Disease was discussed. Its prevalence in all parts of the world was exhaustively treated by Dr. J. Davies Thomas, who also contributed a paper on Treatment, characterised by similar thoroughness. Drs. Gardner, Verco, Thomson, Lendon, and others assisted in the elucidation of the subject, the preference for free surgical intervention being marked. Amongst papers on other subjects may be cited: A Review of the Operation of Laparotomy, by Dr. Sydney Jones; the Surgery of the

Kidney, by Dr. W. Gardner; and a full description of a novel and highly successful Plan for the Treatment of Talipes, by Mr. T. N. Fitzgerald. The volume embraces also papers on Cystotomy and Supra-pubic Lithotomy, by Dr. McCormick, Mr. Tremearne, and Mr. O'Hara; whilst Cerebral Surgery is illustrated in the record of a case of Abscess in the Left Middle Cerebral Lobe, evacuated after trephining. The patient temporarily improved, but life was not saved. In the section of Hygiene, the Sanitary Conditions of many parts of the Colonies are discussed by the President, by Dr. Ashburton Thompson (for New South Wales), Mr. Springthorpe (for Victoria), and Mr. Leger Erson (for New Zealand). The question of Sewage Disposal is ably treated by Dr. W. F. Taylor, and a detailed account of Anthrax in Australia, with especial reference to Pasteur's method of vaccination, is afforded by Mr. Hamlet. Reasons for creating a State Medical Service are advanced in a paper contributed to this section by Dr. J. T. Mitchell. In the course of his presidential address to the section of Obstetrics and Gynæcology, Mr. Batchelor speaks sternly of unnecessary oöphorectomy. Dr. Balls-Headley discusses the conditions calling for Removal of the Tubes; and Dr. Gardner writes on Twisting of the Pedicle in Ovarian Tumours. The question of the charge of puerperal patients by medical men exposed to infectious disease is raised by Dr. Verco. There are several important papers on Insanity and its treatment, read in the section of Psychological Medicine, and the subject of Inebriety also finds exponents. But space will not permit us to do more than simply allude to these, or even to mention many other equally valuable contributions that were made to the Congress. Our readers must turn to the volume themselves, where they will find much that will interest and instruct them.

New Zealand: for the Emigrant, Invalid, and Tourist. By JOHN MURRAY MOORE, M.D. Pp. 253. London: Sampson Low and Co. 1890.—This work gives the result of Dr. Moore's observations during a residence of nine years in New Zealand, to which he went as an invalid and from which he returned in restored health. It contains much useful recent information respecting the climate of the different islands and districts, and points out clearly the differences between it and the climate of Australia and Tasmania. New Zealand has a great variety of climate, and is free from periods of lasting drought, which are so common in Australia. Dr. Moore has subdivided New Zealand, for the purposes of health-seekers, into four general climatic zones, of which he has given detailed descriptions with special reference to their respective influence upon the various classes of diseases for which change is usually sought, and the cases for which they are unsuited. He has devoted a chapter to the mineral springs, which are numerous, varied, and some of great strength; seventy-three of these springs have already been analysed. There are three established spas in New Zealand, where proper hotel and bathing accommodation is provided. These are Waiwera, twenty-six miles north of Auckland, where there is a hot alkaline spring which issues from the sand at a temperature of 110°; Te Aroha, 126 miles south-east of Auckland, with eighteen springs, of which fifteen are hot, and all except two are alkaline; Rotorua, 167 miles from Auckland, and 1000 feet above the sea level, has "the most powerful hot sulphur baths in the southern hemisphere"; of these Dr Moore has given a detailed account, with specific directions as to the class of cases in which the use of these baths is likely to be beneficial. In addition to the professional information, there is much that is interesting respecting the "wonderland" of New Zealand, the volcanic eruption of Mount Tarawera in 1886, the productions and industries of the Colony, and the conditions of social life. Under the title of "Professional Experiences," the author has given much definite information respecting the chances of success for medical men and the conditions under which it is likely to be attained—a chapter deserving the study of intending professional emigrants. The book appears to have been carefully written, is very readable, and contains much information valuable to all who take an interest in our colonies, and especially to those who have to study the climate of different health resorts with a view to recommending patients or friends to those most suitable for their special conditions. It has also the advantage of a copious index.

A Journal of the Great Plague of Marseilles in the Year 1720. Republished, with an introduction, by EDWARD EVAN MEERES, M.D. Lond. London: Simpkin, Marshall, and Co. 1889.—This is a reprint of an anonymous contemporary record of a visitation of epidemic sickness that cost Marseilles one-third to one-half of its inhabitants in the year 1720. The account, of which an English edition appeared in 1726, may lack the vivid character of Defoe's famous journal; but it has the merit of being the production of an eye-witness, whereas Defoe's work was not written until nearly sixty years after the events which it professes to describe so minutely. It is instructive to learn how at the first onset of the pestilence every means were taken by the authorities to conceal its true nature, and there is no doubt that it was imported into Marseilles direct from the East. The sombre hue of the story is relieved by the conspicuous devotion to the sick exhibited by certain members of the religious orders, who braved the dangers of contagion when others more directly responsible for the health of the city had abandoned their proper duties. Dr. Meeres has prefixed to the reprint a few pages of introduction, in which the salient features of the plague, and of this epidemic in particular, are briefly outlined.

The Journal of Anatomy and Physiology. Conducted by Professors HUMPHRY, Sir W. TURNER, and J. MCKENDRICK. Vol. XXIV., Part III. Williams and Norgate. April, 1890.—This part contains the following contributions:—1. Professor Cunningham: The Complete Fissures of the Human Cerebrum, and their Significance in Connexion with the Growth of the Hemisphere and the Appearance of the Occipital Lobe. 2. Sheridan Delépine, M.B.: A Fermentation Causing the Separation of Cystine; the ferment the author thinks must be a large organism, since it is separable by filtration. 3. Arthur Thomson, M.B.: The Orbito-maxillary Frontal Suture in Man and the Apes, with Notes on the Varieties of the Human Lacrymal Bone. 4. Professor Turner: Human Neck, with the Odontoid Process Distinct from the Body of the Axis Vertebra. 5. R. Glasgow Patteson, M.B.: A Contribution to the Pathology of Joint Bodies; Dr. Patteson holds that loose cartilages are wandering osteophytes, which grow and live, after liberation into the joint, by imbibition, and that they are evidences of a rheumatic arthritis. 6. Oswald Latter, B.A.: Abnormal Reproductive Organs in Rana Temporaria. 7. Professor Cleland: Fibro Plates and Intervertebral Discs. 8. Joseph Tillie, M.D.: A Contribution to the Pharmacology of Curara and its Alkaloids. 9. G. B. Howes, F.L.S.: Variation in the Kidney of the Common Thornback, Raia Clavata, its Nature, Range, and Probable Significance. 10. Professor Greenfield: Case of Malformation of the Heart, with large Deficiency in the Inter-auricular Septum, Patency of the Foramen Ovale, and Stenosis of the Aortic Orifice. 11. Dr. J. L. Hoorweg: Physical Notes on the Motion of the Blood in the Human Arteries; a valuable contribution to our knowledge on the subject

THE LANCET.

LONDON: SATURDAY, MAY 24, 1890.

THE paper which Dr. KLEIN read on the 22nd inst. before the Royal Society on the Etiology of Diphtheria is a fitting sequel to that which Mr. W. H. POWER read in 1879 before the Pathological Society. Mr. POWER had been engaged on behalf of the Local Government Board in the investigation of outbreaks of infectious disease, which were traced to the distribution of particular milk-supplies. In his study of the circumstances of these outbreaks, he was led to conclude that the usually accepted theory that milk obtained its infective properties from human contagion failed to afford adequate explanation of the occurrences under his observation. Particularly in regard to an epidemic of diphtheria in North London, he found that the milk which had undoubtedly given rise to the prevalence of this disease was the product of two businesses respectively at Muswell-hill and Kilburn owned by the same person, and of two sets of cows, not of a single set; that the potency of the milk to do harm had been manifested at one time by the milk of one business, at another time by the milk of the other business; and that, although investigation showed that the surroundings of the cows at the one and the other place had been remarkably distinct, there had been occasional transference of the cows themselves from one place of business to the other. There arose, therefore, Mr. POWER pointed out, presumption that it was not by transference of any condition or thing external or incidental to the cow, but rather that it was by something personal to the cow or cows that the observed transference of morbific power from Muswell-hill to Kilburn was brought about.

It is not matter for surprise that Mr. POWER'S suggestions did not, at that time, commend themselves to all engaged in the study of bovine and human diseases, but unfortunately criticism passed into censure, and words were used at the Central Veterinary Medical Society which gave no promise that the points he had indicated would be considered deserving of further study by veterinary pathologists.

Since then, however, evidence has been growing in support of the view that some condition of the cow is responsible for her milk attaining infective properties; and, further, there have been indications that the cat, not less than the cow, may be accused of playing some part in the infection by diphtheria of human beings. Such evidence has needed the test of direct experiment before any final conclusions could be formed, and this Dr. KLEIN has undertaken for the Local Government Board, with results of which he gave an account in his paper before the Royal Society. The evidence now before the profession goes to prove the existence of a natural malady occurring amongst cats in association with diphtheria in the human subject, the cats suffering from broncho-pneumonia, and later their kidneys being found to be large and white, with the cortex in a state of fatty degeneration; further, the existence of a bacillus obtained from diphtheritic membrane, which, when inoculated into guinea-pigs, cats, and bovine animals, produces a local tumour, in which the bacillus is found to have multiplied, followed by congestion of the internal organs, broncho-pneumonia, and at a later stage, if the animal live, fatty degeneration of kidney. When inoculated into the cow, the tumour is found to be followed in a day or two by a papular eruption on the udder. This eruption passes rapidly through the stages of vesiculation and pustulation, the pustules changing into a crust with sores beneath. But there is a difference between the guinea-pig and cat on the one hand, and the cow on the other, in the circumstance that the bacillus in the former animals is limited to the region of inoculation, but in the cow is found in the eruption on the udder and in the milk. Whether this would be found to be equally true if the guinea-pig or cat were in a state of lactation, there is apparently as yet no evidence to decide.

Coincidently with Dr. KLEIN'S investigations, an unintentional experiment was performed, which tends to confirm the identity of the natural disease in the cat and the inoculated disease in the cow. Two cats in the Brown Institution, where these investigations were conducted, died of a disease resembling that already described as occurring naturally in these animals, and all cats put subsequently into the same shed became affected in the same way. It was subsequently discovered that the first two cats had been fed with milk from the cows that had been inoculated, and their illness coincided in point of time with the disease of the cows. Dr. KLEIN has guarded against too hasty a conclusion on this head by pointing out that the man who had assisted him in his work was in charge of the cats, but no great probability can attach to this chance of infection.

The evidence, therefore, appears to show a relation between a natural disease of cats and diphtheria in man, and between diphtheria in the cow and this malady in cats, and is therefore as complete as it can be without intentional experiment on the human subject; but if inquiry be made in the directions indicated, whenever diphtheria is found to occur in association with milk distribution under circumstances in which human contagion can be set aside, it is probable that the evidence already adduced will be considerably strengthened.

It is not likely that the hostile feeling exhibited towards Mr. POWER'S proposals eleven years ago will again be aroused by the publication of this confirmation of his views. It can now hardly be held that he has formulated "a hypothesis that admits of the clearest refutation." There is doubtless much more to be learnt in connexion with this subject than is yet known, and to its further study the members of both the medical and veterinary professions may well devote themselves. But we may already congratulate Dr. KLEIN and Mr. POWER on the results of their labours, which have created against the lower animals a case too strong to be lightly set aside. Upon a better acquaintance with the eruptive diseases of the cow our next advance in knowledge must depend.

WHATEVER failure may attach to the work of the Lords' Committee on Metropolitan Hospitals in the sense of settling the questions mooted, it seems sure of success already as a means of raising every conceivable point in connexion with our hospital system. We have no wish at present to com-

plain of this feature of the inquiry so far as it has proceeded. But even at this stage it may be well to point out with some precision the number of questions that are being presented by different witnesses and the variety of opinions on them that is being expressed. So far the inquiry has turned chiefly—and happily so—on the out-patient department. This is really the department which is most open to criticism, and which is most liable to abuse. But the Committee does not, of course, confine its questions to this department. Referring to it the questions are sweeping. Should there be any out-patient department at all? If it were entirely abolished, would the poor or the public be anything the worse? and would the profession be much the better? If not abolished altogether, should the number be reduced to a certain amount of new cases daily, as forty new medical and forty surgical at Guy's, or fifteen new medical and fifteen surgical at St. George's? Should any pay be exacted from them, as at Guy's? Does the petty pay so exacted elevate the nature of the transaction between the patient and the hospital, and raise it out of the domain of pauperising influences? Does it not rather tend to degrade the estimate of medical service in the eyes of the out-patients? Of what class are these out-patients?—really poor, or comparatively well-to-do lower middle-class tradespeople, and the working classes?—as Dr. STEELE declares them to be at Guy's, where alone they are indulged in the luxury of being made to think that they are paying for the benefits they receive. Supposing the number of out-patients to be severely limited, who is to dispense the favours of selection—house surgeons and physicians, as at Guy's, or the porter, as at St. George's? Are the out-patients treated by senior students or by responsible and qualified officers of the respective institutions? Is any effective and serious attempt made to find out the means of out-patients or of in-patients? Is the out-patient department kept up for the benefit of the patients, or in the interest of the hospital or of the medical school attached to it? Has it attained to its present inflated proportions in any natural and healthy way, or by artificial advertisement and facility? Should hospitals be converted into a sort of provident dispensary, and their favours reserved for those who are members of the provident dispensary? How does our voluntary hospital system compare with the continental one of State-supported hospitals? Do the patients fare better or worse, and is the administration more or less economical? What is the bearing of the new type of hospitals—the Poor-law infirmaries—on the whole hospital problem, in its social and professional aspects? What are the claims of special hospitals? Is there any justification for their further development? or have they not been practically superseded by the creation of special departments in general hospitals?

Such are some of the big questions which are already raised, and on which every successive witness is giving answers with more or less precision. It is not our intention at present to criticise these answers or to anticipate the general impression made. But we would impress both on the Committee and on the witnesses the importance of extreme precision of question and answer. The object is to do the greatest amount of good to the hospitals and the least amount of harm. It is gratifying to notice that so critical a witness as Mr. TIMOTHY HOLMES thinks that our hospitals, with all their faults, compare favourably with the State-maintained institutions of the Continent; that they are healthier, that the patients fare better, and that their cost is less, albeit, he says, that the out-patient department is there more consultative and less indiscriminate than with us. The truth on all these points will appear more clearly as the inquiry proceeds. It is most desirable that the profession should not forget its unity in this inquiry. It will be unfortunate if we break ourselves up into parties, and if those who are fortunate enough to hold hospital appointments and those who are not do not pull together. We all owe very much to our hospitals, and without them medical science would be indefinitely hindered. But they are not meant to be wholesale institutions for the ordinary ailments of the people. They are lowered in public estimation by being put to such a use. On the other hand, their momentous services to medical art and to medical education make it incumbent on all critics not to clog the main inquiry by raising irrelevant points, and to be prepared to substantiate every reflection on their administration.

THAT the due regulation of rest and exercise is one of the most cardinal conditions of health is now one of our obvious axioms. We all grant with equal readiness that exercise is a valuable therapeutic agent, but the difficulty is often to define what we mean by exercise and to determine the class of cases to which it is applicable. We commonly use the word exercise in the sense of general muscular activity, but a little reflection suffices to show that most forms of exercise call only a portion, and sometimes a very limited portion, of the muscular apparatus into activity, while we may sometimes endeavour to exercise one organ to the exclusion of the others. Thus walking exercises chiefly the muscles of the legs and back, riding those of the arms and back, while swimming, gymnastics, and most of our popular games call a still wider area of the muscles into play. That physical exercise may prove of value in the most unexpected conditions is strikingly shown by the excellent results which OERTEL has obtained by its means in cardiac disease. On few points is there more general agreement than upon the great value of rest in valvular and degenerative lesions of the heart, but the teaching of OERTEL has reminded us that we may push this salutary principle too far, and that in certain cases of early cardiac affections, where the valvular defect is slight and the myocardium still fairly competent, continuously regulated exercise may be of the utmost value in promoting muscular tone and improving the vigour of the cardiac contractions. The lungs, again, are organs to which exercise may not seem obviously applicable, but we are becoming accustomed to the idea expressed by the phrase "respiratory therapeutics," and are more ready than formerly to admit that there are conditions in which it is of the highest importance to promote the full activity of these organs by the means at our disposal. These means are numerous and varied. Ordinary exercise, such as walking and riding, no doubt secures a considerable amount of pulmonary activity. Swimming,

involving as it does the shock of contact with cold water and a very full degree of general muscular effort, attains this end still more efficiently, but it is a form of exercise which is often contra-indicated in cases of disease. Mountain climbing secures very ample expansion of the chest, and in suitable cases and under due regulation is one of the best forms of exercise. Then, lastly, we have singing and the playing of wind instruments, which constitute the most specialised kinds of pulmonary exercise.

In determining the application of these forms of exercise as therapeutic agents we have to bear in mind the condition of the throat and lungs, and also the general constitutional state. It is obvious that they are unsuitable to all acute affections, and to conditions of extreme debility. We have left for consideration such cases as chronic laryngitis, chronic pleurisy, with more or less collapse of lung, chronic pneumonia, chronic bronchitis, emphysema, and phthisis. As regards laryngitis, there can be little doubt that, whereas rest to the voice is imperative while there is any acute inflammation of the vocal cords, carefully regulated singing under skilful direction may be of great value in more chronic conditions, as the improved quality of the notes elicited under training testifies. In chronic pleurisy and chronic pneumonia one of our chief aims is to promote expansion of the chest, and this is often effectually secured by regulated mountain climbing in a good climate. In no class of case has a residence at the mountain sanatoria been more efficacious than in those of this group. On the other hand, chronic bronchitis and emphysema constitute a class of affections in which, as there is already over-expansion of the lungs and a tendency to an increase of this defect, respiratory gymnastics of any kind are sure to prove injurious. FAGGE says very truly that "to persons who have suffered from bronchitis, and in whom the distending process has already begun, it is a very important piece of advice that they should avoid all occupations or amusements that involve the repetition of such efforts. Playing a wind instrument may sometimes be exceedingly injurious, for although the glottis is not closed, the air within the chest is kept under great pressure, while it is being slowly allowed to escape." We may lay it down as a general rule of practice that persons who are bronchitic or emphysematous, even in a mild degree, should not engage in violent games, or try mountaineering, or resort to the high altitude sanatoria, or play any wind instrument, and that they should only practise singing with great moderation.

The case of phthisis is more difficult, as the disease is so protean in its aspects, and the constitutional state is as important as the pulmonary condition. There can be very little doubt that in early apyrexial phthisis a fairly active life should be enjoined, that singing may be permitted and even encouraged, and that even playing an instrument like the flute, which does not require violent effort or involve extreme pulmonary tension, is probably safe enough; while more advanced cases, or cases specially prone to hæmorrhage, must be judged according to their peculiar features and may require different rules. In the prophylaxis of phthisis it is probable that respiratory gymnastics will become more and more recognised as essential. It is just in such cases that those forms of exercise which secure full and regulated expansion of the chest may be expected to do most good. The great point to remember is not to overdo it—*ne quid nimis*.

A word may be said, in conclusion, regarding the relative merits of some of the methods enumerated. Singing will probably be found as a rule more suitable than playing a wind instrument. Among instruments there is a great difference in the amount of strain which they throw upon the lungs, which is much less in the case of the flute than in that of the oboe or cornet. Some considerable importance must also be attached to the attitude assumed by the player; the more free that attitude and the more play it allows to the expansion of the chest the better. A constrained position of body or a heavy instrument, especially if it rests upon the chest, would naturally aggravate the disadvantages of this form of exercise. We may also keep in mind the place where the performer plays and the quality of air which he is likely to be continually breathing. In some cases, especially those of incipient phthisis, foul air would probably more than undo any benefit which might otherwise accrue from some of the forms of exercise which we have been considering.

OUR columns to-day bear witness to the fact that the registration of midwives is one of the questions of the day, and can, like any other question, be viewed from different points. Dr. RENTOUL regards the legislation for this purpose as utterly uncalled for by the public and utterly inimical to the interests of the medical profession. It is very questionable whether the medical profession would consult its own interests by offering opposition to this Bill. Midwives are an old institution—as old as Genesis,—and probably preceded either the general practitioner or the consultant in the history of mankind. They have gradually given place to the regular practitioners of medicine in civilised countries, and will do so more and more. The claims of midwifery are placed in the last Medical Act on a level with those of medicine and surgery, and, as Dr. RENTOUL indicates, the reduction in the mortality of lying-in women is an achievement of *medical* science, and can only be maintained by the methods which that science suggests. Under the English Poor-law system a medical officer is not allowed to send a midwife as a substitute for himself in midwifery cases. This is as it should be; and as people become more civilised they will refuse to have their women attended in labour by other than fully qualified members of the profession. Meantime we have to do with facts, and with this fact: that a large proportion of women are now so poor as to be unable to pay the fees of medical men, and that they incur awful risks and suffering from the ignorance of women who, by the mere assumption of the title of "midwife," at present place themselves in an apparently authorised position. The object of the present Bill is to abate this misery, to add something, at any rate, to the difficulty of assuming the title and office of midwife, and to make some amount of training essential to the acquisition of the status of a midwife. Surely, so far it will tend to reduce the number of midwives. Dr. RENTOUL says the public have not asked for it. There is some truth in this. What does the public know of what transpires in the lying-in chamber of a woman who has 5*s*. or 7*s*. 6*d*. to spare for a midwife's fee? There is nothing more pathetic in the world

than the suffering that goes on in such rooms, unless it is the uncomplaining patience with which it is borne. But if the public is unaware of the evils of ignorant midwifery, the profession is not, and our interests cannot be served by lending a hand to hinder legislation that obtains in most other European countries. Everything must be done to limit the midwife severely to the simple duties of a natural case. And it is satisfactory to see that the boards to which the duty of regulating the registration and examination of midwives is assigned are to consist of medical men of standing who will be likely to impress this limitation on those registered. The remarks on the training of nurses and midwives, by Dr. GRIFFITH and Dr. CULLINGWORTH, present another aspect of this question. Dr. CULLINGWORTH is right in saying that three months' training is not enough to make a midwife. Still less is the mere attendance on twenty-five cases, under the supervision of a medical man or a registered midwife. Three months is far less than the time needed to make a nurse. Another fault in the Bill is that it does not provide that henceforth the use of the term "midwife" by persons not registered will be a breach of the law to be punished by a proper fine. If such a provision is not inserted we shall still have the old race of midwives surviving, and we may as well have no legislation.

Annotations.

"Ne quid nimis."

NOTIFICATION AND ITS RESULTS.

IT must necessarily be some time before the full and possibly varying effects of compulsory notification of infectious diseases can be properly appreciated. Already we are beginning to receive communications bearing on this point, and two which come to hand at the same moment will serve to point out how undesirable it is to be in too much haste in forming definite opinions on the subject when only brief periods of time and small populations are concerned. Dr. E. M. Shirtliff transmits his annual report on the health of the borough of Kingston-upon-Thames during the past year, in which he gives an account of the first year's working of the Infectious Diseases Notification Act. He says the Act has been faithfully carried out by the medical practitioners in the borough, and although householders have in some instances made default, this has been "only through want of knowledge." Indeed, the main opposition from householders is apparently due to a resentment against enforced isolation for a sufficient period in the case of such diseases as scarlet fever. As to this disease, Dr. Shirtliff implies that early notification of cases "in the families of charwomen, tailors, dressmakers, laundresses, and so forth," followed by the resulting isolation and other measures, together with pecuniary compensation for suspended work, had in all probability saved the borough from a severe outbreak. Scattered cases cropped up, but, the disease not gaining strength, it is said to have remained of a mild type and to have been all but stamped out. On the other hand, we have received a communication of an entirely different character. Our correspondent, dealing with 1889 as the first year of notification, says that, whereas the general and the zymotic rates for Kingston were 14·2 and 0·7 per 1000 in 1888, they rose respectively to 17·3 and 1·1 in the notification year, and he so words his communication as to imply that we have here one of the "results" of notification; another being concealment of cases by householders, owing, amongst other things, to the fact that fair compensation for loss of employment is not held out as an inducement to the poor. For the moment we would only concern ourselves with the statistics, and we would call attention to the fact that, in the absence of compulsory notification, the general and the zymotic death-rates for 1886 were 19·3 and 1·8, and those for 1887 18·8 and 2·7, per 1000 respectively; in other words, both rates were distinctly higher than during the notification year. And further, it should be noted that the zymotic rate of 1·1 per 1000 during 1889 is one of the smallest during the decennium 1880–89, when the mean exceeded 1·6 per 1000, and that, whereas the zymotic deaths for the year on which the rate of 1·1 per 1000 is calculated numbered 29 in all, no less than 26 of these—namely, diarrhœa 11, whooping-cough 10, and measles 5—were due to diseases not notifiable under the Act.

UNIVERSITY OF LONDON.

WE understand that the arrangements agreed upon by the Committee of Senate of the London University in conference with the University Colleges are as follows:—The University Colleges on their part expressed a willingness to accept the Senate of the University, with some suitable modifications of its constitution, as the ultimate authority in the Teaching University for London. There would be a new system of graduation established, independent of the present system of graduation by open examinations, of which the principle would be that the examinations should follow the teaching of the London institutions. This system would be administered by a Committee of the Senate, upon which teachers and the administrators of teaching would have an adequate representation. This was accepted by the Committee of the Senate, which proposed also that the administration of the present system of open examinations should be confided to a properly constituted Committee of the Senate, distinct from the Committee for the London teaching side. It was further agreed that the development of teaching by way of the University Extension lectures or otherwise in London should be part of the work of the Committee for the teaching side. The composition of this Committee is still to be arranged. The University Colleges ask that no single element—that is to say, neither that of the present University nor that of the University Colleges—should have a majority over all others; and they desire that the Royal Colleges and other medical schools should be represented, upon some basis to be agreed upon, satisfactory to all parties. The precise arrangements in regard to medicine are reserved for consultation with the authorities of the profession. This plan is understood to be now under consideration by the Senate.

THE SANITARY STATE OF HASLEMERE.

THE *West Surrey Times*, whilst referring in complimentary terms to the useful service which THE LANCET does in arousing local authorities to a sense of their duties in respect of sanitary matters, altogether objects to our comments in the same direction when applied to a favourite Surrey town. We refer to our recent article on the sanitary state of Haslemere. Indeed, our contemporary goes so far as to say that, whereas it is itself keenly alive to the need for progress in matters relating to public health, we have, on the other hand, been wholly and inexcusably led astray on this occasion. We would not for a moment detract from the value of the attitude which our contemporary claims to have hitherto maintained, and we readily admit the correctness of the assertion that it has, on

occasion, protested "against apathy and inactivity where a real evil or danger" has existed. Indeed, it is because of this very attitude that we claim alliance with the local paper in its war against such delay and inactivity as we felt it our duty to refer to. In March, 1879, our contemporary gave some prominence to a report on Haslemere. That report referred to insanitary conditions which were only "too notorious," to the lack of proper means of drainage, and to the resulting high mortality; and, significantly heading its comments by the words "Something Wrong Somewhere," it went on to say: "Some months ago, it will be remembered, Messrs. Bailey Denton and Co., the eminent engineers, prepared a scheme of drainage and also of a new water-supply for the town, at the instance of the rural sanitary authority, but the parochial sanitary committee managed to get both put aside." This attitude of apathy and delay is precisely the point to which we adverted, and we hope that, if it has not already been ascertained, some effort will be made to find out with whom rests the "wrong" which was admitted in 1879, and also with whom it has been lying ever since that date.

THE COLD BATH IN SCARLET FEVER.

THE good effect of cold immersion in severe scarlet fever was well illustrated in a case related by M. Dieulafoy at a recent meeting of the Paris Hospitals Medical Society (*Bull. et Mém. Soc. Méd. des Hôpitaux*, No. 15). The patient, a girl sixteen years of age, was, on the sixth day of the fever, attacked by marked nervous symptoms, excitement, insomnia, suppression of urine, pulse from 120 to 150, and very high temperature. On the eighth day her condition was very grave, the eruption had disappeared, the temperature was 40·9° C. (105·6° F.), pulse irregular and intermittent, and the prostration extreme. In spite of the fact that she was menstruating, he advised the cold bath, and after some delay the friends of the patient permitted the measure. She was placed in a bath at 24° C. (75° F.) which caused severe shivering, cyanosis, and coldness of the extremities. But the pulse rate fell from 150 to 100, and the delirium ceased. At the end of fifteen minutes she was removed from the bath, which was repeated three times during the night, at higher temperatures. This treatment was continued up to the eleventh day, when the body temperature became normal. M. Dieulafoy advocated the bath in all malignant forms of fever, and its good effects in scarlet fever were endorsed by MM. Johel-Renoy and Duponchel, who had obtained similar good results. Dr. Huchard advised caffeine injections for the collapse.

PUBLIC EXHIBITIONS OF HYPNOTISM.

THOUGH but lately introduced to public notice, hypnotism has for many years attracted a share of professional attention. A certain interest doubtless attaches to the subject, but this is of a serious rather than an amusing kind, a fact which is not so fully recognised as it should be. It is of some consequence from a scientific standpoint, for example, to determine the psychical forces concerned in producing this condition. It is, further, somewhat important practically to decide how far the artificial slumber may be utilised for therapeutic purposes, though its occasional success when thus employed will probably never compensate for the time and effort often vainly spent in striving after this result. Up to this point, however, we can at least allow that serious honesty of purpose on the part of those concerned affords some show of justification for the peculiar nervous change effected by them. When we come to such novelties of recreation as the hypnotic *séance* the case is quite different. There is at any time an element of danger involved in a practice which numbs the senses and energies of the nervous system as hypnotism does. The creation of what amounts to cataleptic torpor is itself morbid. It implies, moreover, either a previous abnormal sensitiveness in the nervous centres of the medium acted on or the employment of an unusual and powerful agent to control those of ordinary stability. Either way the process and its effects are unwholesome, needless, and undesirable. Another consideration is that of after-consequences. As regards these, no definite statistics, indeed, are obtainable, but common experience teaches that, the will mastered, and that not once but often, by another, is less potent for its individual work in life than it was before. What right, then, we would ask, has anyone to subtract thus much from even a unit of human usefulness? The privilege based on reason, and claimed by the genuine scientific observer, we have already referred to. That of the mere performing conjuror of the entertainment-room neither fashion nor money gain will justify. Such exhibitions as his should be discouraged by all rational persons, and in cases where consent has been actually or virtually forced, should be punishable by law.

ALBUMINURIA AS A RESULT OF THE MORPHIA HABIT.

AT the meeting of the Société Médicale des Hôpitaux on May 9th, Dr. Huchard pointed out (*L'Union Méd.*, No. 58), that the abuse of morphia sometimes causes albuminuria, which leads to death by uræmia. Levinstein has published seven such cases, and Dr. Huchard contributed three others, all fatal from uræmia. As to the connexion between the renal disease and morphinism, Dr. Huchard suggested that it might be through the action of the poison on the medulla, or by long-continued diminution of arterial tension; for he has found that morphine lowers arterial tension considerably, thus favouring passive congestion in the organs, the kidney among others. According to him, whereas excessive arterial tension will ultimately bring about arterio-sclerosis, a persistent lowering of tension can lead to Bright's disease (obviously Dr. Huchard does not here speak of granular kidney, which is associated with high arterial tension). In conclusion, he pointed out that morphiomania, a cerebral condition, required different management from morphinism.

YSTRAD AND NOTIFICATION.

THE attitude of the Ystrad local board of health towards the question of the notification of infectious diseases is one which the passing of the Infectious Diseases (Notification) Act should have rendered altogether impossible. As far as we can understand, there has been an attempt on the part of that authority to secure the notification which that Act enforces without making any payment for the information, such as the same statute requires. A deputation of medical men having attended the board, it was intimated that if the authority put the Act in force the medical practitioners would on their part loyally carry it out, and this notwithstanding the views they hold to the effect that its requirements go beyond that which in their opinion the State should properly demand. But, as Dr. Davies pointed out, the medical profession stood in the front ranks of those who gave gratuitous services, and hence where a statute definitely assigns remuneration for a task which it imposes, the authority had the less right to ask that that duty should be performed and then refuse to pay the fee. Dr. Parry also urged that until the local authority had proved that they were too poor to pay for that which was intended as a boon to the public at large, there was absolutely no reason why the medical profession should forego its very limited rights in this matter. One member of the local board is reported to have said that the ratepayers felt very strongly on the question, and that if refusal were maintained they would "make their feelings known." Apparently this threat had to do

with an attempt to extort work from the medical practitioners without the remuneration which legally attaches to it. If we are right in the surmise that it was so intended, we prefer not further to characterise so unworthy a speech. But we may add that if those who have to live by their respective callings in Ystrad are expected to work gratuitously whenever the benefit of the ratepayers is concerned, the members of the board themselves, in their respective professional and trade capacities, had better set the example.

A CHECK UPON EARLY MARRIAGES.

A VARIETY of arguments, based on science, prudence, and economy, have often been urged against the headlong folly of very early marriage. Reasoning of this kind, however, has unfortunately but little influence with such as those who commit the folly in question, for, indeed, it is not reason in any recognisable degree which guides their crude calculations. If it were, the probability of overstrain in childbirth, which is the natural counterpart of early functional activity, of domestic discord and beggary, and their too common social accompaniments, would not be so freely and frequently encountered. These matters are part of the tribute which will always be paid while, for the want of native sense and sound home training, fancy is allowed to guide one of the most important concerns of life. The one available means of cure for this prevalent evil consists in a just exercise of parental control, but this, we need hardly remind ourselves, is only too easy of evasion. In a case lately reported to the Holborn Board of Guardians a juvenile couple and their infant, already dependent on the rates, were said to have been married by the Superintendent Registrar on receipt of a forged notice of consent purporting to come from the girl's father. The lesson thus conveyed was not lost on the board, which decided to notify the Registrar-General as to the wisdom of instructing an official to make personal inquiry in all such cases respecting the wishes of the parents in regard to the matrimonial ventures of their children under adult age. The proposal is certainly a sound one, and represents the minimum of justifiable interference on the part of a society which regards its own most natural interests.

HEALTH AND EXERCISE.

THE fact that wrong is in many cases a mere expression of excess in what was right finds numerous illustrations. Most vices indeed can on this ground claim a highly respectable ancestry. The value of exertion, again, in its various forms (whether associated with work or play) has doubtless ever been, as it still is, discounted by the same inherent risk. Thus it is that we find even so great a boon as physical exercise becomes in many minds, and not unreasonably, the subject of conflicting doubts. It has been overdone; the recreative mean has been passed, and the resulting exhaustion can find no solace but in rest. Notwithstanding fears, however, and the injury wrought by abuse, there still exists in most men a sense—healthy, so far—of the necessity for daily muscular exertion. It needs only that this perception be combined with a due regard for the powers to be employed in order to ensure that moderate use which is alone compatible with natural and refreshing recreation. It is hardly needful here to discuss at length the several advantages arising out of such well-regulated exercise. Its influence as a cardiac and respiratory stimulant, as a muscular tonic, and an aid to digestion are universally admitted. Less easily apparent, but no less important in their practical issues, the significance of the oxidative and excretory changes associated with these actions is somewhat apt to be overlooked. A due regard for such considerations, nevertheless, is of the first importance in regulating the conditions most suitable to muscular activity. In this matter, indeed, mere practical experience has proved an excellent guide. The removal of all avoidable encumbrance about the chest during gymnastic exercise, for example, is in strict if unconscious obedience to the call for adequate pulmonary oxidation and excretion of carbonaceous matters. For a similar reason alcohol, as impeding tissue metamorphoses, has rightly fallen into comparative disuse. Associated with this question of the tissue changes is that of the benefit accruing to digestion as a consequence of exertion. There can be no doubt that here also we experience a distinct gain from exercise, and of this a stimulated appetite is a sufficient guarantee, while it also testifies to increased vigour in the work of assimilation. It should always be remembered, however, that in such cases the time is everything. Severe exertion just before as well as after a meal will certainly impair if not defeat its intended purpose. The influence of age, sex, and previous activity on the question of exercise must not be overlooked, since it is, we repeat, on the observance of a due proportion between the amount of muscular energy available and the occasion of its use that the final result in gain or loss will depend. Regularity is another noteworthy consideration. To go through a daily modicum of physical exercise is distinctly more helpful to the permanent welfare of the body than any mere holiday outburst of muscular and nervous energy, though it occur under the happiest local conditions. If such considerations as those we have above stated be allowed to govern the methods and the times of its employment, we need not doubt that muscular exercise will continue to maintain its deservedly high reputation among the processes of healthy life.

SCARLET FEVER AND SCHOOL CLOSURE.

IT having been reported by Mr. McNicoll that sixty-six cases of scarlet fever had come to his knowledge during the previous five weeks in St. Helen's, and that, notwithstanding a prohibition as to school attendance on the part of children from houses which were known to be infected, the disease was still being spread by school influence, the question of school closure came under discussion by the health committee of the Town Council. Mr. McNicoll's report went to show that, as yet, the disease was all but confined to two localities, and under these circumstances it was wisely decided that, instead of closing all the schools throughout the borough, those schools only which received children from the neighbourhoods in question should be closed for a period of one month. It might be well, as an additional precaution, that the officers of the schools which remain open should daily inquire as to any sickness in the homes of their scholars, with a view, after communication with the borough health officials, to the exclusion of scholars from any houses where scarlet fever or suspicion of it exists.

PURGING THE HOARDINGS.

IT has long been a patent fact that the liberty of representation hitherto allowed to advertisers without distinction has been employed in many cases without due regard for public taste, or even for common decency. Placards emblazoned with the disgusting portraitures of anatomical monstrosity, of disgraceful crime, and of horrors which in their scenic extravagance would scarcely excite the contempt of most intelligent persons, but which it can hardly be doubted are more eloquent than description to the ignorant, continue to disfigure almost every hoarding. The patience of many citizens has been exhausted years ago, but their protests have till recently accomplished no change in the old order which let ill alone. Now, at last, there are signs that the London County Council have some sympathy

with their complaints and share their justifiable impatience. According to recent reports it is intended to request the Theatres Committee to threaten managers with suspension of their licences unless their advertisements, if considered prejudicial to public morality, be removed forthwith, and guarantees be given that the offence will not be repeated. It is time indeed that some such restrictive measures were adopted. The County Council, moreover, we feel assured, will know how to enforce their views with such discretion as to leave all reasonable liberty of action in the hands of advertisers, theatrical and other, while observing a due regard for the natural aversions of a not very exacting population.

PUBLIC LIBRARIES AND CONTAGION.

WE have on several occasions discussed the possibility of conveying infection by means of books lent out by circulating libraries. That disease may be thus conveyed there can be no doubt, though this affords no real ground of objection to the loan system if ordinary precautions be observed. It is therefore the more satisfactory to note that librarians on their part are not inclined to neglect any due care in this particular. As an instance, we may now refer to the method pursued at one public establishment of this kind where lists of all infected houses in the surrounding streets are received weekly. The occupants of such houses, if in receipt of books are warned not to return them until effectually disinfected. No doubt the Act for the Notification of Infectious Diseases would afford useful assistance to all such endeavours on the part of librarians to avoid any possible transfer of contagion, and they would do well to avail themselves of its aid. It should be remembered, however, that it does not cover every communicable disease, measles being a noteworthy exception. In order to secure still further the desired immunity, it is advisable that each borrower be required, under suitable penalties, to guarantee the freedom of his household from infection at the time being, to report immediately the appearance of infectious disease, and to arrange for disinfection of books on loan to him. We would further suggest that the work of disinfection be carried out if possible at the library building itself. Its efficiency could then be assured.

THROAT COMPLICATIONS IN TYPHOID FEVER.

THAT patients suffering from typhoid fever frequently become partially deaf is well known; Niemeyer attributes this symptom to the extension of the pharyngeal catarrh to the Eustachian tube, and speaks of it as being one of the ordinary phenomena of this disease. Landgraf (*Centralblatt für Klinische Medicin*, No. 17) has made observations on 166 patients suffering from typhoid, of whom 46 were males and 70 females; of the former, 28 had throat complications, of the latter 13. The mortality of those thus affected was 17 per cent. in the males and 23 per cent. in the females, whilst in those who had no such complications, the mortality was 8·2 in men and 8·5 in women. The most common condition was a simple catarrh of the pharynx and larynx. Follicular tonsillitis, described by some writers, Landgraf had never seen among his patients. On the other hand, in a great number of cases he had noticed small superficial ulcers on the soft palate, epiglottis, uvula, and mucous membranes of the lips. These ulcers generally appeared during the second week, did not affect the follicles of the tonsils, and healed more or less rapidly from the edges without the formation of scabs. He does not consider that they had any prognostic signification. Whether in severe cases they are to be considered as diphtheritic in nature (*Mischinfection*) or not is an open question. As regards the larynx, Landgraf found that this organ was attacked in one-half of the patients. Usually there was merely a simple catarrh, which showed itself as a partial reddening of the mucous membrane, especially on the inner surface of the arytenoids and epiglottis. This catarrh began between the end of the first week and commencement of the third. It was accompanied with very few subjective disturbances, was followed by desquamation of the epithelium, and generally passed away in a few days. In most severe cases yellowish-grey flecks appeared, usually on the edge or under surface of the epiglottis or on the arytenoids. These flecks consisted, in two cases from which scrapings were taken, of collections of micro-organisms (staphylococcus pyogenes flavus and aureus). These flecks, like the catarrh, rapidly disappeared. In other cases more or less œdema occurred, which chiefly affected the edge of the epiglottis, and led to deep ulceration and denudation of the cartilages. There was great pain on swallowing. The course was almost always favourable, though deformities or scars of the epiglottis occasionally remained. Another and more serious affection of the larynx consisted in erosion of the mucous membrane, not only of the epiglottis, but also of the vocal cords, the aryteno-epiglottidean folds, and the posterior wall of the larynx. Deep ulceration occurred very often with the formation of a membrane like diphtheritic membrane, and not uncommonly led to perichondritis and stenosis of the larynx. Landgraf considers that this necrosis of the mucous membrane is a local gangrene, produced not by pressure, but by blood stasis. In favour of this, he asserts that this complication only occurred in those severe cases where there was great loss of strength, and that therefore the administration of stimulants was urgently called for. Occasionally typical typhoid ulcers were seen, similar to and occurring at the same time as those met with in the intestine. These were situated on the posterior wall of the larynx, on the under surface of the epiglottis, and on the false vocal cords. They were characterised by having undermined edges which were swollen and dark in colour, and by the thick, uneven floor. Perichondritis was always secondary, appeared only during the convalescent stages of the disease, and attacked the arytenoids. Landgraf has twice observed paralysis of the laryngeal muscles. In one case there was paralysis of the left vocal cord, and in the other the crico-arytenoideus posticus was affected.

CHIMNEY-SWEEPS AND MALIGNANT DISEASE.

IN a contribution to the recently issued twenty-fifth volume of the St. Bartholomew's Hospital reports, Mr. Butlin again takes opportunity to demur to the oft-repeated assertion that sweep's cancer is gradually disappearing owing to improvement in the art of sweeping chimneys, and also in the habits of sweeps, and to point out that the Registrar-General's statistics at any rate show a continued and remarkable liability to malignant disease among chimney-sweeps. In Dr. Ogle's valuable contribution to the Registrar-General's supplement to the forty-fifth annual report some very interesting statistics are given concerning the mortality statistics of chimney-sweeps, which show that during the three years 1880–1–2, the mortality figure among males aged from twenty-five to sixty-five years engaged in this occupation was 1519, the figure for all males at these ages being 1000. Dr. Ogle called attention to the fact that the numbers upon which this calculation was based were small, but that they not only corroborated existing statistics for previous periods, but showed a consistently marked excess, not only at each of the several age periods dealt with, but also under all the principal groups of diseases. It is true the sample from which conclusions as to the causes of deaths of chimney-sweeps were drawn only included 242 deaths, but these gave some very startling results bearing upon the mortality from malignant disease incidental to this occu-

pation. No less than 49 of these 242 deaths were due to some form of malignant disease, giving a proportion of 202 deaths from this cause to 1000 from all causes; whereas among all males aged from twenty-five to sixty-five years only 36 of 1000 deaths were so caused. The mortality from malignant diseases would thus appear to be nearly six times as great among chimney-sweeps as it is in all other occupations; moreover, as chimney-sweeps suffer from a total mortality exceeding the average by 50 per cent., it follows that their liability to malignant disease is about eight times as great as the average liability of all males. It was also pointed out by Dr. Ogle that in no fewer than 23 of the 49 fatal cases of malignant disease among chimney-sweeps the site of the disease was returned as the scrotum, groin, testes, or penis; in 7 it was the stomach or liver; in 5 it was the lip, face, orbit, or palate; in one the neck; and in the remaining 13 cases the part or organ affected was not stated. These figures give increased interest to Mr. Butlin's recently published statistics. It appears that between 1869 and 1888 39 patients were under treatment in St. Bartholomew's Hospital for cancer of the scrotum, the large majority of whom were chimney-sweeps. We note with interest that Mr. Butlin proposes to investigate in greater detail the relation of employment to malignant disease.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

ON Wednesday evening the members of the Pharmaceutical Society held their annual dinner at the Freemasons' Tavern, Mr. M. Carteighe, the President of the Society, in the chair. Among the guests were the President of the Royal College of Surgeons, the Treasurer of the Royal College of Physicians, the Presidents of most of the medical societies in London, the Presidents of several of the learned societies, and several well-known members of the medical profession. Dr. R. Farquharson, M.P., replied for "The Houses of Parliament." Mr. Hutchinson and Sir Dyce Duckworth, in replying for "The Medical Profession," referred to the great advances in skilled pharmacy during the past thirty-five years, and to the rise in status and education of the pharmacist by means of the examinations and researches in the laboratories of the Pharmaceutical Society during recent years. The Chairman, in replying to the toast of "The Society," proposed by Dr. Quain, pointed out that the ambition of its members was to become skilled dispensers and preparers of drugs, and as such to be real handmaidens to, and not rivals of, the medical profession. "Our Guests" was felicitously responded to by Professor Odling, F.R.S., and by Mons. E. Ferrand, a distinguished *pharmacien* of Paris. A most enjoyable evening was passed.

PARISH GUARDIANS AND OVERLAIN CHILDREN.

THE voice of economy is rarely absent for long from the counsels of parochial boards. As regards its utterances, we freely admit that they have often been inspired by practical wisdom, and deserve to be received with hearty approval. Unfortunately there is in such matters no unbroken record of success, and there have been occasions not a few on which even an unpractised ear could catch among the tones of genuine thrift the peccant falsetto of short-sighted parsimony. Now it is the cost of medical assistance, now the necessary use of knife and fork at meals, or, again, some other equally needful expense, which is grudged. The latest instance of this penurious temper occurred a few days ago at a meeting in the City-road Workhouse. Some time previously an infant had been suffocated in bed by being overlain. Acting on the warning thus conveyed, the workhouse medical officer twice over urged the guardians to provide a dozen cots in the lying-in ward for the use of young children, who must otherwise incur the risk of a similar fate. On both occasions the application was refused. Viewed in the light of recent events the position thus taken up by the parish authorities is altogether illogical. On the one hand, we find coroners advising, as the only reliable check on a fruitful source of infant mortality, that a penalty should be imposed on all parents who sleep with their infant progeny; on the other, the official administrators of the Poor Law refusing to provide for their nightly separation. The position of the latter in this case is an obviously false one, a timely retreat from which is the only honourable course.

COMPLIMENTARY DINNER TO SURGEON PARKE, A.M.S.

THE committee for arranging the dinner to be given to Surgeon Parke by members of the medical profession in recognition of his devotion and distinguished services during the late Emin Pasha Relief Expedition have communicated with him, and it has been found that Friday, June 6th, would be a day convenient to Mr. Parke to accept the invitation. Consequently the dinner will take place at the Criterion Restaurant upon that date at 7.30 P.M. for 8 o'clock. Sir Andrew Clark, Bart., President of the Royal College of Physicians, will occupy the chair, and Mr. Jonathan Hutchinson, President of the Royal College of Surgeons, will be vice-chairman. They will be supported, amongst others, by Sir James Paget, Sir Prescott Hewett, Sir Joseph Lister, Sir Trevor Lawrence, Sir Spencer Wells, Professor J. Marshall, Sir J. Fayrer, Sir E. Sieveking, Sir Dyce Duckworth, Sir W. Mac Cormac, Dr. Quain, Mr. Erichsen, Dr. Russell Reynolds, Dr. Wilks, Professor Humphry, Mr. Wakley, Mr. T. Holmes, Dr. Andrew, Dr. Dickinson, Mr. Macnamara, Dr. Glover, Dr. Holman, and Dr. Bridgwater. Any information with regard to the dinner, and tickets for the same, may be obtained of Mr. Howard Marsh, 30, Bruton-street, who is acting as honorary secretary.

THE COLLEGE OF SURGEONS' LECTURES.

THE lectures at the Royal College of Surgeons will be continued as follows during next month:—Professor W. H. Battle will give three lectures on "Some Points relating to Injuries to the Head," on the 2nd, 4th, and 6th. Professor Walter Pye will deliver three lectures on "The Growth Rates of the Body, and especially of the Limbs, in their relation to the Natural and Surgical Processes for Rectification of Deformity," on the 9th, 11th, and 13th. Professor John Langton, three lectures on "The Etiology of Hernia, and its bearing on the Treatment of the Disease," on the 16th, 18th, and 20th. And the Arris and Gale lecturer, Mr. Wm. Hunter, three lectures on "Ptomaines—their Nature and Actions," on the 23rd, 25th, and 27th. The lectures will be delivered at 5 P.M. in the theatre of the College on the Monday, Wednesday, and Friday of each week.

POISONING BY ANTIFEBRIN.

DR. J. VIERHUFF of Subbath, in Courland, communicates to the *St. Petersburger Medicinische Wochenschrift* the notes of a case of antifebrin poisoning, which show what dangers people run who dose themselves with drugs of this class. A healthy young married woman, who had been in the habit of taking antifebrin for headache, feeling the pain come on early one morning last summer took, fasting, about a teaspoonful of the drug in some water. In about ten minutes, the headache not being relieved, she repeated the dose, which her husband remarked might prove dangerous. She consequently took a glass of milk and some alum water in order to produce vomiting, which she succeeded in doing, but immediately afterwards giddiness, singing in the ears,

throbbing in the temples, and a dull pain in the head, together with a feeling of weakness, came on, and the face assumed a livid hue. When seen four hours after the drug had been taken the face was a livid colour, the lips blue, the pupils contracted, but the heart, temperature, and mental condition were normal. An aperient and a stimulant were ordered. Shortly afterwards the patient became suddenly collapsed, the pulse could not be counted, and the breathing was very shallow; in fact, the woman appeared to be dying. The soles of the feet were brushed, vinegar was rubbed on the face, and cold water sprinkled over the face and chest; also a mixture of camphorated oil and ether was ordered for injecting subcutaneously. While this was being procured several syringefuls of dilute spirit, which was all that could be obtained, were injected and the patient was brought round, though for three hours and a half her condition appeared hopeless. Then, after recovering somewhat, collapse again came on, and recourse was had to an intravenous injection of a solution of common salt, which appeared to act most beneficially. In about fourteen hours after the drug had been taken the patient was out of danger. After that she continued to improve, though she complained of debility and pain in the limbs for a week. Dr. Vierhuff remarks that the serious symptoms were probably due largely to the patient's taking the antifebrin on an empty stomach.

STREET FLOWERS AND CONTAGION.

OPINIONS have often been divided respecting the necessity for special legislation. The reason is not far to seek when we reflect that, while this weapon has for certain worthy purposes rendered most useful service, it has also, on occasion, proved an effective means of privileged injustice and oppression. Such, we consider, would have been the result if a by-law suggested the other day to the Mayor of Liverpool, by a deputation of fruit and flower dealers, had been agreed to. In the eyes of these disinterested men, it was time that some restraint were placed upon the practice of their own particular calling by street hawkers. Their view, naturally enough, did not by any means ignore trade interests, but it was also supported by the contention that, as many flower hawkers lived in parts of the city where infectious diseases were prevalent, their customers might inhale contagion with the odours of the bouquet. Happily, the municipal authorities have not yet been convinced by this rather overstrained argument. It is, indeed, more subtle than substantial, and we may safely hazard a doubt if even an enthusiast in sanitation would condemn as unfit for use a flower fresh enough to tempt a purchaser and ventilated by the breezes of the open street because at some period it might perhaps have "breathed in tainted air." It should not be forgotten that the exhalations of many plants possess antiseptic properties, and that these, moreover, are in some degree natural to all healthy tissues. The sanitary argument therefore is, for the purposes of the deputation, of little or no value. Perhaps the dread of competition had something to do with their zeal for hygienic purity.

PHTHISIS IN THE GERMAN ARMY.

AN enthusiastic German hygienic reformer in his graduation thesis on Phthisis in the Army, which he thinks he has proved to be more frequent than among similar persons in civil life, proposes that before enlisting a recruit not only should he be carefully examined as to his freedom from phthisis, struma, joint and bone affections, and tubercular lupus, but that all his near relatives should also be examined. Should this be done, and every recruit in whose family any of these conditions existed be rejected, the German army would soon shrink to very limited proportions; for, as the *Deutsche Militärärztliche Zeitschrift* remarks, in its review of the thesis referred to, "How could the genuineness of each recruit's relatives be ascertained, and even if this could be done, why should a strong healthy recruit be refused because some of his family are phthisical? When the author suggests that twenty cubic metres should be allowed per man, and that the sleeping and day rooms should be separated, the *Zeitschrift* is quite disposed to agree academically, but remarks that such expensive schemes are hopelessly impracticable. Similarly it cannot be arranged that the drills and various duties required of the soldier, which are doubtless trying to many men's constitutions, should be curtailed, for that would require an increased length of service, the burden of which is quite great enough as it is. On the whole, the *Zeitschrift* does not appear to believe that phthisis is any more prevalent in the army than in civil life, and deprecates the publication of statements calculated to cause needless anxiety amongst the public generally.

BIRTHDAY HONOURS TO MEDICAL MEN.

THE Queen has been pleased to approve that Sir Henry Wentworth Acland, K.C.B., Regius Professor of Medicine at the University of Oxford, be created a Baronet of the United Kingdom. Surgeon-Major Alfred S. Lethbridge is appointed to be Companion of the Most Exalted Order of the Star of India. Morgan S. Grace, M.D., Member of the Legislative Council of the Colony of New Zealand, and Surgeon-General of the Local Military Forces, has been appointed an Ordinary Member of the Third Class of the Most Distinguished Order of St. Michael and St. George. A similar honour has been conferred upon David P. Ross, M.D., M.R.C.S., Colonial Surgeon of Sierra Leone.

PUBLIC HEALTH IN NEW SOUTH WALES.

EVIDENCE is accumulating on all hands to show the increasing interest which is being taken in our colonies with regard to the promotion of measures of public health, and a paper prepared for the Intercolonial Medical Congress of Australasia by Dr. Ashburton Thompson points to a number of successful efforts that have been made in this direction by the Government of New South Wales. The population probably now exceeds 1,050,000, and the area of the province covers 310,700 square miles. There is no Public Health Act properly so-called, and apart from the Adulteration and the Dairies Supervision Acts, and an Act relating to infectious diseases, public health measures are mainly carried on under powers contained in special sections. No properly constituted health service is said as yet to exist, but the Government provides a Health and Medical Department, and they possess a medical adviser, a deputy medical adviser, a chief and second medical officer, as also a health officer who is concerned with maritime quarantine alone. Dr. Ashburton Thompson himself holds the post of chief medical inspector and deputy adviser. There is a Board of Health, with its staff, including a veterinarian, and there is a staff of public vaccinators. Vaccination is not compulsory, and for the years 1883–87 there remained of 173,785 births as many as 140,000 not accounted for as regards vaccination. This it doubtless is that leads to the retention of quarantine for small-pox being regarded as so essential. Eleven country towns now have a public water service, but outside the metropolis there is no system of sewerage; and even in Sydney the defective state of the existing sewers and the absence of disconnexion between them and the house drains must cause anxiety. Fortunately, the majority of the drain inlets are out of doors, and this notwithstanding the increase in the number of waterclosets. But whilst

these defects stand out somewhat prominently it is satisfactory to note that the attention of the public is year by year being drawn to them, and that the question of their remedy is engaging the attention of the Board of Health and the central Government, and of their technical advisers. In short, sanitation is steadily progressing, the incentive coming largely from the medical staff, who lose no opportunity of utilising such occurrences of disease as they have to investigate in the direction of educating the public to the great need which exists of providing adequate remedial measures.

BRITISH DENTAL ASSOCIATION.

ONE of the most successful of the branch meetings of this Association was held last week at Derby, under the able presidency of Mr. George Brunton of Leeds. He remarked in his address that Mr. Gladstone said the other day that "surgery began with John Hunter," and he thought that they might justly claim that dental surgery also began with him, notwithstanding that the remains found in Egyptian and Etruscan tombs show that dentistry dates far back in the ages. Hunter's idea of fixing a filling, as described in his "Treatise on Diseases of the Teeth," was drilling a hole and putting a peg through the tooth and filling to keep the two together, and extractions were mostly done with the key or elevator, whereby "it generally happens," says Hunter, "that the alveolar process is broken;" whereas now, thanks to Sir John Tomes and others, instruments have been so improved that if fracture of the alveolus resulted, it was generally through the fault of the operator. Hunter said that "we have not yet found out the means of preventing this disease [caries] or of curing it;" but wonderful progress has since then been made through the use of the microscope and advance in mechanical skill, and although dentists are not able to cure disease, as surgeons do, by removing the diseased portion and allowing nature to do the rest, they can do so by cutting out the diseased part and substituting a foreign body, such as gold, amalgam, cement, gutta-percha, &c., and thus restore the form and functions of the tooth. To show the demand for dental work in modern times, he instanced that it has been estimated that 30,000 ounces of gold are used for stoppings annually, and that in America there are 15,000 dentists, and in England over 4000; also most European capitals have their schools of dental surgery. Patents Mr. Brunton considers to have been a serious drawback to the profession, especially in America, where not only are special instruments patented, but a royalty is even demanded from practitioners using certain methods.

THE PRESCRIPTION OF OPIUM SMOKING.

THERE is no need to dwell on the evils of opium smoking. It is on a par with "opium eating," and, in spite of the example set by Coleridge and De Quincey, the better sense of mankind has declared against habits which enslave both mind and body, and degrade the finer susceptibilities for the sake of a transient exhilaration. We, as a nation, have to reproach ourselves with fostering such habits by legislation for the sake of revenue, and yet we know that the evils of the opium traffic in China and India are far worse, in many respects, than that of the alcohol traffic in our own country. We do not wonder at the aversion with which many regard the attitude of Great Britain in this direction. Moreover, it may be necessary for the medical profession to speak out on the question more plainly and decidedly than it has hitherto done, since there is, we fear, only too good reason to believe that the habit of opium smoking is becoming introduced into this country; and that, too, under professional advice. Should this really be the case—and a statement to that effect seems to have gone the round of the press,—we trust that no time will be lost in the emphatic repudiation of such pernicious practice. If, too, any practitioner who is responsible for the introduction of this insidious line of treatment is amenable to the authority of the Royal College of Physicians, it is time that the College should clear itself from the scandal of appearing to sanction such a line of practice. Whilst allowing full liberty to its Members and Fellows to treat diseases according to the best of their ability, it is plain that there may be circumstances where something more than a protest should be raised. At any rate, the College, in its own interest, and on behalf of the medical profession as a body, should take every means to prevent the growth of an evil which might be laid at its doors. It may be said that the same strictures are applicable to the prescription of morphia injections or of alcohol, since the abuse of these drugs has often commenced by the taste acquired for them during an illness when they were necessary. But we have yet to learn that the inhalation of opium smoke is a remedy of any value, and we do know that it becomes a habit difficult to cure, and degrading to its victim.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE inquiries which we have addressed to the secretaries of the hospitals and medical charities of London have met, as usual, with a prompt response, for which we tender our best thanks to our various correspondents. In some few instances, however, the communication appears to have been overlooked, and we beg therefore to remind our friends of the fact, and to ask that in these cases the desired returns may be furnished with as little further delay as possible.

THE ANTISEPTIC TREATMENT OF TYPHOID FEVER.

ACCORDING to Dr. Petresco, who has been employing bisulphide of carbon in the treatment of typhoid fever, the difference in the mortality of cases treated in this way from that of cases treated according to more usually recognised systems is very considerable. The mixture prescribed was of the strength of 2 per cent., the vehicle being mint water. Of this mixture from three to four ounces were ordered daily. The mortality of typhoid in Bucharest is generally from 25 to 38 per cent., but under the bisulphide of carbon treatment Dr. Petresco lost only 10 per cent. of his cases. Even more remarkable were his results with β-naphthol, of which from forty-five to sixty grains were given per diem. Under this treatment he lost only 4 per cent. of the cases. Sometimes wet sheet packing was combined with the internal medication, sometimes not. He states that not only was the mortality diminished under bisulphide of carbon or β-naphthol, but that the whole course of the disease was rendered milder, and there was a remarkable immunity from serious complications.

THE GERMICIDAL PROPERTIES OF URINE.

DR. LEHMAN of Würzburg, remarking that urine rarely contains pathogenic bacilli, although they usually abound in the kidneys in infective diseases, determined to inquire whether the absence of bacteria in the urine is due to the filtering process to which it is subjected in the kidneys, or to some inherent germicidal property. The nature of the constituents of urine—viz., acid phosphates, carbonates, and aromatic bodies—would seem to render the theory of bactericidal action not improbable. His experiments were conducted in the following way. Fifty cubic centimetres of fresh urine were added to one cubic centimetre of a twenty-four hours old broth culture of anthrax, cholera, and typhoid bacilli, and, after being well shaken up, one

cubic centimetre of the mixture was employed to fertilise an agar plate culture. This was kept in an incubation apparatus. In all cases the number of colonies was found to have diminished, the greatest diminution occurring when the initial number of colonies was comparatively small. The germicidal property of the urine appears to be interfered with, if not destroyed, by neutralisation with potash and also by sterilisation. From some observations made by Dr. Richter it would seem that fresh albumen has a powerful action on the bacilli of anthrax and typhoid, but that the yelk of egg, on the other hand, forms a particularly suitable culture medium for them.

THE SELECT COMMITTEE ON HOSPITALS.

WE would remind those of our readers who have not yet returned to our office the form of petition which we printed in our last issue that the earlier the prayer of the memorial is brought under the notice of their Lordships the better will be the chance of the request being granted. The object of the petition is so reasonable that it can hardly fail to obtain the consideration it deserves if the wish of the profession is rendered manifest by a very large number of signatures.

GERMAN UNIVERSITIES.

FROM some statistics just published, it appears that 29,000 students matriculated at the Universities of the German empire last winter session. Berlin numbered over 5500, Munich and Leipsic about 3500, Halle, Würzburg, Breslau, Tübingen, and Bonn between 1200 and 1700, Heidelberg, Erlangen, Strasburg, and Freiburg between 900 and 1000, Göttingen, Marburg, Königsburg, and Greifswald between 750 and 900, Giessen, Jena, and Kiel between 500 and 600, the Academy of Munster 405, and Kiel 346. Leaving out of account the three largest Universities, the medical faculties most frequented were Würzburg, Strasburg, and Greifswald. Of the large Universities, Munich seems to have had the largest number of medical students—some 50 more than Berlin. The total number in all the medical faculties was 9103, this exceeding the number belonging to any other faculty, even the philosophical, which is credited with 7352.

FOREIGN UNIVERSITY INTELLIGENCE.

Bonn.—Dr. Leo, Assistant in the Berlin Policlinic, has been appointed Extraordinary Professor of Medicine and Director of the Policlinic, in succession to Professor F. Müller, who has gone to Breslau.

Halle.—A memorial is to be erected to the late Professor Volkmann; for this between £400 and £500 have been already subscribed.—The new Hygienic Institute has just been opened. The director is Professor Renk. It contains a lecture theatre, and chemical, physical, and bacteriological laboratories.

Kharkoff.—Dr. Kuchin, Professor of Histology and Embryology, is about to retire. Dr. Jasinsinski, Extraordinary Professor of Midwifery, has been promoted to a full professorship.

St. Petersburg (Medico-Chirurgical Academy).—Professor Bykoff, the Principal of the Academy, is obliged to leave on account of his health.

Tomsk.—The number of students (who all belong to the Medical Faculty) has now reached 170. The professorships are being gradually filled up, but there are still a dozen vacant.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. M. Bittencourt, Professor of Mental Diseases in the University of Bahia; Dr. Zimmermann of Odessa, to whom Russian medical men owe a translation of Rokitanski's "Pathological Anatomy"; Dr. Constantine Müller of Kielce, in Russia, formerly assistant to Professor Hyrtl in Vienna, Dr. Nevski of St. Petersburg.

PROFESSOR ERICHSEN has, we understand, resigned his appointment as inspector under the Vivisection Act, a post which he has held with great advantage to the profession for some four years past. We understand that Mr. Erichsen has taken this step entirely on private grounds, and from the need which he finds of lessening all compulsory work. When we consider the amount of work which Mr. Erichsen does as president of University College and in other directions, we cannot wonder at, much as we may regret, his resignation of an office which he has filled with singular judgment and urbanity. The Home Secretary has, we learn, appointed Dr. Poore to be Mr. Erichsen's successor in the office of inspector.

IN reference to the paragraph on St. Mungo's College in the letter of our Glasgow correspondent, we understand that a memorial is now in the hands of the clerk of the General Council of Medical Education and Registration, in which the memorialists point out that they consider the examinations for the diploma of public health at present conducted by the Glasgow University authorities insufficient, both as to its merits and as compared with the examinations of other licensing bodies. The Council is urged to appoint an independent committee to inquire into the whole question.

BETWEEN Rome and Naples the Red Cross of Italy has been running a hospital train composed of ten carriages—two for the directing *personnel*, one for the registrar and for wounded officers, two for fourteen patients (sick or wounded of each troop), one for medicines and alimentary stores, one for the culinary service, one for the assisting *personnel*, one as an escort carriage, and one as a luggage waggon. Inspected at various points of the line by medical experts, it is reported to have fulfilled its functions admirably.

WE understand that Dr. Edward Thompson, Surgeon of the Tyrone County Infirmary, and Mr. Kelly of Drogheda, are candidates for the Council of the Royal College of Surgeons in Ireland. At present, we believe, there is no representative of the country Fellows on the Council, although they number more than half the electors, and it seems only fair they should have some representation, and two seats out of nineteen are not too many.

GRACES have been offered to the Senate of the University of Cambridge for conferring the honorary degree of LL.D. upon Sir Andrew Clark, Bart., F.R.S., President of the Royal College of Physicians of London, and Mr. Jonathan Hutchinson, F.R.S., President of the Royal College of Surgeons of England.

AT a meeting of the Court of Governors held at Guy's Hospital last week the following appointments were made in consequence of Dr. Pavy's retirement from the post of senior physician:—Dr. Hale White to be full physician, Dr. J. W. Washbourn to be assistant physician.

THE annual dinner of the officers of the Army Medical Department will be held at the Holborn Restaurant on Wednesday, June 18th, at 7.30 P.M.

DR. JOHN ABERCROMBIE, F.R.C.P., has been elected Physician to the Charing-cross Hospital in the place of Dr. A. Julius Pollock, deceased.

THE

HYDERABAD CHLOROFORM COMMISSION.

THE REPORT OF THE SECOND COMMISSION.

APPENDIX B.

METHOD OF EXPERIMENTATION.

ADMINISTRATION OF ANÆSTHETICS.

FOR experiments on the general action of chloroform the animal was usually placed upon a table and held by several assistants. An inhaler, consisting of a conical bag of cloth containing a sponge or absorbent cotton-wool with the anæsthetic, was then placed over the animal's mouth and nostrils, and kept there as long as necessary. While one observer watched for the loss of reflex from the cornea, the cessation of respiration, stoppage of the pulse, and arrest of the heart, another seated at an adjoining table with a watch before him noted down the times at which each event occurred. The corneal reflex was ascertained by simply touching the cornea with the finger or a blunt instrument, such as the point of an aneurysm needle. The cessation of breathing was ascertained by simple ocular inspection of the thorax and diaphragm, the presence or absence of the pulse by feeling the femoral artery with the finger, and the entire stoppage of the heart's action by watching the movements of a needle pushed through the thoracic walls into the heart. The movements of this needle were rendered more evident by a straw bearing a small paper flag being fixed to the end which projected outside the thorax. Animals anæsthetised by this method struggled while they were held until the anæsthetic had had time to take effect. In order to avoid struggling another method was adopted. This consisted in simply lifting the animal into a wooden box 3 ft. 10 in. long by 1 ft. 5 in. broad, and 1 ft. 7 in. deep, and putting on the lid, in which was an opening. Through this opening was passed a large piece of blotting-paper on which half an ounce or more of chloroform had been poured. A piece of wood or glass was then placed over the opening in the lid, and in a short time the anæsthetic took effect. To prevent too large admixture of air a strip of spongio-piline was nailed round the edges of the box and covered with vaseline, so that the lid shut down air-tight. Even when a piece of wood was used to close the aperture in the lid at first it was usually replaced by glass, when the chloroform began to take effect, as the movements of the animal could thus be watched. When it fell down insensible it was usually taken out at once, and if prolonged anæsthesia was required, as for blood-pressure experiments, an additional quantity of the anæsthetic was administered on a cap.

ADMINISTRATION OF DEFINITE PROPORTIONS OF CHLOROFORM VAPOUR.

In order to make animals respire air charged with definite proportions of chloroform vapour, the following methods were used.

(*a*) A certain quantity—e.g., ½ oz., 1 oz., or 2 oz. of chloroform was poured on blotting-paper in the box already described, and when it was seen through the glass in the lid that evaporation was complete, the lid was lifted, the animal introduced, and the lid quickly replaced. The box contained almost exactly eight cubic feet of air, so that the proportion of chloroform vapour in it was easily reckoned. As the whole of the chloroform was evaporated before the animal was introduced, the alteration which its bulk produced in the air-content of the box did not affect the proportion of vapour.

(*b*) But in the process of opening the box and introducing the animal there was almost inevitably some disturbance of the air charged with chloroform which the box contained. In order to avoid this, a box of tin plate the same size as the last was taken, and a round opening 5 in. in diameter was made in one end near the bottom. Round this a collar of tin plate ½ in. in depth was soldered, and on the top of the box was another opening 8 in. long by 5½ in. broad covered by a tin lid. The chloroform was introduced by the opening on the top, and allowed to evaporate as before, and the animal's head was then introduced through the opening at the end, and made as nearly as possible air-tight by a piece of mackintosh fastened to the tin collar surrounding the opening, and tied round the animal's neck.

(*c*) When it was thought desirable to make the animal inspire a definite proportion of chloroform vapour through a tracheal cannula, the same apparatus as above described was used, but in one end of the box two tin tubes were fixed each ¾ in. in diameter. These were connected by indiarubber tubing of a similar bore to the arms of a tin Y tube. The leg of this tube was connected with indiarubber tubing to a glass cannula tightly tied into the trachea. By means of indiarubber valves the current of air was made to circulate always in one direction.

(*d*) When it was desired to insufflate the animal's lungs with air containing a definite proportion of chloroform vapour, the apparatus just described was employed with the addition of a bellows, which drew the air from the box. In the valve-hole of the bellows a ¾-in. tube was fixed by means of a large cork bung. This tube was connected by a ¾-in. indiarubber tubing with one of the tubes in the end of the box already described, and by the Y tube with the tracheal cannula. A valve over the nozzle of the bellows and another on one arm of the Y tube regulated the direction of the current of air. These valves consisted simply of a piece of dentists' sheet rubber tied loosely over the end of the nozzle or tube and then cut across. When the air passed in one direction—e.g., from the bellows—it blew open the edges of the cut rubber, but when it tried to pass in the opposite direction the edges of the rubber fell together and presented a considerable obstacle.

ADMINISTRATION OF DEFINITE QUANTITIES OF CHLOROFORM.

For the purpose of giving a definite quantity of chloroform with unlimited quantity of air another apparatus was used. It consisted of a wide-necked jar 7 in. deep by 5½ in. internal diameter. The top was closed by a tightly-fitting bung, in which there were three apertures. In two of these were fixed ¾ in. glass tubes, and the third was closed by a small stopper, which could be withdrawn at will for the purpose of introducing chloroform into the bottle. To one of these tubes a valve was attached which only allowed the air to enter the bottle, but prevented its exit. The other tube was connected by wide rubber tubing with a tin inhaler. This inhaler was in the form of a truncated cone, and had two ¾-in. tubes opening into it. One of these was at the apical end, and the other at the side of the inhaler. The apical tube was connected with the bottle just described. The side tube was closed by a simple valve consisting of a perforated cork, over which a strip of thin sheet rubber was loosely fastened. At each expiration the rubber allowed the air to escape freely, but at each inspiration it closed completely. The muzzle of the animal was inserted in the inhaler, and a piece of mackintosh was tied round the inhaler and the head of the animal by means of an elastic bandage, so that the inhaler was nearly air-tight. On inspiration the air passed through the glass cylinder, becoming partially charged with chloroform on its way, and during expiration it passed out through the side tube of the inhaler.

For the purpose of keeping up artificial respiration an ordinary bellows was employed, but to the nozzle of it was fixed a valve which closed when the bellows was pressed, and thus directed the air into the lungs, but opened as the bellows expanded, and thus allowed the air to escape from the lungs. This valve consisted of a T tin tube ¾ in. in diameter. One end of its transverse limb was connected with the nozzle of the bellows, the other with the tracheal cannula. The opening of the perpendicular limb was covered by a piece of tin plate mounted on a hinge in such a way that when the bellows was pressed a cord tied to the upper handle of the bellows pulled it down and closed the opening, but during the expansion of the bellows it was raised and the opening uncovered by the elastic force of a piece of indiarubber. The cord and indiarubber were both attached to a short rod fixed at right angles to that which carried the cover. When it was desired to give chloroform vapour along with the insufflated air, a piece of blotting-paper soaked with chloroform was held over the valve opening of the bellows, or the opening was closed by a bung and wide rubber tube, and the blotting-paper was placed inside the tube. In the first com-

parative experiments on the effects of chloroform and ether on the heart in monkeys, when given by insufflation, the bellows and valve just described was employed. Instead of one limb of the T tube being directly connected with the tracheal cannula, however, it was connected to a small glass T tube. Each of the other limbs of this tube passed to a long-necked glass flask furnished with a tubulature through which the anæsthetic could be introduced. The neck of the flask was closed by a stopper through which two glass tubes passed, one reaching only a little way below the stopper, but the other extending nearly to the bottom of the flask. One of these tubes was connected with the glass T tube just mentioned, and the other with a glass cannula tightly tied into the trachea. At each blast of the bellows the air passed onward through these glass flasks to the tracheas of the animals, and returned through the flasks and out through the valve during the expansion of the bellows. It is evident that by this arrangement a certain admixture of ether and chloroform vapour will occur in the tubes between the animals and the valve, so that after a few blasts both animals will receive mixed vapour, although that of chloroform will predominate in the one case and that of ether in the other. In order to avoid this admixture the bellows was used without the valve, and provision was made for allowing the air to escape from the lungs by using a different form of tracheal cannula. Instead of a plain glass tube a small glass T tube was used. The perpendicular limb was inserted into the trachea, and one end of the horizontal limb was connected with the bellows; the other was partially closed by a piece of glass tubing, one end of which was drawn out and cut off so as to leave only a small orifice. This was attached by a short piece of indiarubber tubing to the limb of the T tracheal cannula. The orifice was of such a size that while it presented sufficient resistance to the passage of air to allow the lungs to become completely inflated when the bellows was pressed, yet during the expansion of the bellows it allowed the air to escape from the lungs and thus prevented over-distension.

When it was desired to give vapour by insufflation to one small animal, such as a monkey or rabbit, only the indiarubber ball of Junker's apparatus was used instead of the bellows. Junker's apparatus consists of the indiarubber balls ordinarily used for spray producers, but these are attached to a bottle in which the anæsthetic is put in such a way that, instead of producing spray, the air simply passes through the anæsthetic and becomes charged with the vapour. It then passes to a mouthpiece and is inhaled. The mouthpiece which we employed for dogs was made of stout leather in the form of a truncated cone. A metal tube ¼ in. in diameter, opening into the inhaler at its apical end, conveyed the vapour into it. This tube fitted the opening in the inhaler, through which it passed closely, but the junction was not air-tight. The inhaler at its other end did not fit the dog's muzzle at all closely, so that there was a free circulation of air. When we wished to prevent this, and to give concentrated vapour, a piece of mackintosh was tied over the inhaler and muzzle so as to close up the space between them.

BLOOD-PRESSURE EXPERIMENTS.

In all these experiments the pressure within the arteries was registered by one of Ludwig's kymographs consisting of a mercurial manometer and a revolving cylinder on which the oscillations of the mercury were recorded. The paper on the cylinder was smoked by means of burning camphor. The float on the mercury of the manometer consisted of a cylindrical piece of ivory tapering below and bearing above a steel wire, near the top of which a writing point of glass was fixed by a bit of cork. This point was kept in contact with the smoked paper by a silk thread loaded with a shot. To the top of the manometer was fastened a second writing point made of glass or of copper foil. When the mercury was at zero this point was at the same level as the point on the float, and as the cylinder revolved it traced the zero line round it, and thus afforded a means of estimating the height of the blood pressure at any moment. The cylinder revolved once in nearly thirty minutes. Near the top of the cylinder was placed a magnetic time-marker worked by a Du Bois Reymond's key.

An observer sat constantly beside the cylinder with a watch in front of him, and recorded on the cylinder by means of the time-marker, as well as the instant when anything worthy of note occurred, the time, minute by minute When the revolution of the cylinder or drum was complete it was removed, and a second drum, which was kept ready smoked, was substituted. The tracing on the first drum was at once cut off and varnished, and another paper put on and smoked, so as to be in readiness when required.

The movement of the cylinder in these experiments is much slower than that usually employed, but it has the double advantage of allowing the whole record of the experiment to be reproduced, and of rendering distinct even small variations of pressure which are apt to escape observation in the long tracing taken on a rapidly revolving drum. But the tracing taken on such a slow drum as we employed has the disadvantage of being so compressed that the individual pulse beats are invisible.

To obviate this defect a method of double registration was adopted, which had been devised by one of us for a previous research. In the connexion between Ludwig's kymograph and the artery a Y tube was inserted, by means of which a second kymograph, the cylinder of which revolved once in 3/9 seconds minutes, or about ten times as rapidly as the first, could also be brought into communication with the artery. Both were provided with stopcocks, so that they might either be allowed to work simultaneously, or the communication of either or both with the artery cut off at will. If a mercurial manometer had been used in the second kymograph it would have given the number of pulse beats, but the oscillation of the mercury itself would have modified their size and form. One of Fick's spring manometers was therefore used, and, in order to prevent the oscillations of the mercury in the other manometer affecting Fick's, the stopcock connecting the former with the artery was almost always turned off when the latter was turned on. This plan had the further advantage that the straight line traced by the float of Ludwig's kymograph attracts the eye so that a glance at the tracing at once shows when a tracing has been taken by Fick's manometer, and, by attaching corresponding numbers to these blanks in the tracing from Ludwig's kymograph and the tracings by Fick's kymograph, the relation of the tracings to each other can be at once ascertained. The clockwork of Fick's kymograph was usually started at the moment when the stopcock connecting it with the artery was opened. A short time is required for the clockwork to attain its full speed, and therefore at the beginning of a tracing the oscillations may be closer together, and the pulse may appear to be quicker at the beginning than the end of a reading of Fick's kymograph, although the pulse rate might be really the same throughout. The cylinder was usually, though not always, allowed to revolve a little space after the connexion of the manometer with the artery had been cut off in order that the readings might be more distinctly separated from one another. The mercurial manometer was connected with the artery partly by metal and partly by indiarubber tubing. The Fick's manometer was connected entirely by indiarubber tubing in the experiments up to November 5th, but after that the connexion was made partly by indiarubber and partly by metal, exactly as in the Ludwig's. The whole of the connecting tubes, except those between the Y tube and the manometers where water was used, were filled with a solution of sodium bicarbonate in order to prevent coagulation occurring in them.

This solution was made by saturating boiling water with sodium bicarbonate and then boiling it for some minutes, so as partly to convert it into carbonate. It was then allowed to cool, and was poured into a large glass vessel furnished with a tubulature near the bottom, and suspended on the wall of the room at a height of 7 ft. from the floor and 4½ ft. above the level of the table. From the tubulature of this vessel the solution was conveyed by indiarubber tubing to a glass T-piece inserted in the connexion between the manometers and the artery. By means of clamps the soda solution could be passed at will through the tubes leading to the artery. Before beginning an experiment the pressure within the manometer was raised by means of the soda solution to a height approximating to the estimated blood pressure in the animal, so as to prevent the blood from passing too far up the tubes and forming clots. This was also done whenever the artery and manometer had to be disconnected on account of clots having formed. In order further to lessen the tendency to form clots an elongated glass bulb was introduced into the tubing, and was connected by a short piece of indiarubber tube with the glass cannula in

the artery. The cannulas used for insertion into the artery were blown with a short neck to hold the ligature and prevent the cannula from slipping out of the artery. They were of various sizes so as to fit the artery of the animal experimented on. In all the experiments with one exception, the animal was first rendered insensible by being placed in a box with chloroform, as ether given in this way would have been useless. As soon as it became insensible it was taken down and the legs fastened with cords to a simple piece of board 4 ft. 6 in. long by 2 ft. 2 in. broad. To one end of this one of Bernard's dog holders was attached, and in this the animal's head was put so as to hold it still. Chloroform or ether was then administered on a nose-cap as required to keep the animal anæsthetised and one carotid exposed, the left being selected in every case as it was nearest to the manometer. Occasionally one or both vagi were also exposed and a loop of thread placed under them, but not tightened round them.

The artery was firmly ligatured on its distal side, and the proximal side was compressed by spring forceps covered with indiarubber tubing to prevent their injuring the coats of the artery. The artery was then opened, the cannula inserted, and firmly tied in. The cannula was then filled with soda solution by means of a pipette, and connected with the glass bulb already mentioned, care being taken that no air bubbles were present. The spring forceps were then removed from the artery, the stopcock of the manometer turned so as to open the connexion with the artery, and the tracing commenced. All this time the animal was kept unconscious by the administration of an anæsthetic from time to time as required.

REGISTRATION OF THE MOVEMENTS OF THE HEART.

These were sometimes registered by inserting a needle into the heart, and connecting a thread to the end which projected outside the thorax when this was unopened, or outside the cardiac walls when the thorax was opened and the heart exposed. This thread was in the first instance tied to the lever of a Marey's tambour A, and the movement transmitted by it to a second one (B), which recorded it. The resistance of the two tambours, however, was too great, and the tracings obtained were unsatisfactory. Better results were obtained by connecting the needle in the heart with a time-marker by means of two very light wooden pulleys. The lever of the time-markers being kept up by a very fine spring, a very slight pull sufficed to depress it, and thus it marked even when the cardiac action was weak, and had the further advantage of opposing very little resistance to the action of the heart.

REGISTRATION OF THE RESPIRATION.

For this purpose the two Marey's tambours A and B were used. A was usually connected to a needle pushed through the chest walls into the diaphragm. On one or two occasions an incision was made just under the margin of the ribs, and a piece of thick copper wire, flattened at one end, was introduced, so that the flat pieces lay between the diaphragm and liver. The other end projected outside, and the thread from Marey's tambour was fastened to it. In some of the later experiments a fish-hook was used instead of a needle.

Pharmacology and Therapeutics.

TRICHLORACETIC ACID IN THROAT AFFECTIONS.

DR. EHRMANN has employed trichloracetic acid in 140 cases of chronic inflammations and in hypertrophied conditions of various parts in the neighbourhood of the nose and pharynx with very marked success, 122 of the cases being permanently cured. The tonsils or other parts affected were rubbed with a crystal of the acid, which produced a white, dry, smooth, adhering eschar, which is thrown off much more quickly than that produced by chromic acid. No secondary inflammation and no unpleasant effects of any kind were observed. If a mere astringent action be desired trichloracetic acid may be dissolved in an equal weight (or in double its weight) of glycerine, with the addition of a little iodine and iodide of potassium, and the mixture used to paint the throat. This treatment proved very successful in follicular tonsillitis and in chronic pharyngitis.

OREXIN.

Dr. Hugo Gluckziegel has just published some observations upon orexin. The preparation employed was a pill containing a grain and a half of orexin with the extracts of gentian and marsh mallow. First of all, Dr. Gluckziegel and a healthy young medical student took three of the pills daily for four days. No increase of appetite or any other effect, bad or good, was produced in either of them. The treatment was then tried on seventeen patients, who were all suffering more or less from anorexia. In two cases the appetite improved the very first day. In four cases an improvement was noticed on the second day. In three cases no improvement was effected even after some time, but vomiting was produced. After the treatment was stopped, seven patients had a normal appetite, and in four there was a decided improvement. In addition to the vomiting above mentioned the only other case in which any disagreeable effect was induced was that of a man with cardiac disease who complained of pain in the stomach, which, however, disappeared as soon as the orexin was discontinued. It would seem therefore that this drug may, if prescribed with care, be of value in a considerable number of cases of dyspepsia.

BISULPHIDE OF CARBON IN DYSENTERY.

Dr. Jakobleff reports in the Proceedings of a Russian provincial medical society that he has found great benefit in dysentery from the employment of bisulphide of carbon—of course largely diluted. The quantity given per diem was from three to five grains in half a tumbler of water or milk, with a little peppermint. First of all, however, one or two grains of calomel were administered hourly until calomel stools had been induced; and during this time enemata containing a grain and a half of sulphide of carbon in an ounce and a half of water were administered twice daily. Great improvement was produced, and frequently this was as rapid as it was marked, so that there could not be any doubt that it had been brought about by the bisulphide of carbon treatment.

IODOFORM EMULSION IN COLD ABSCESS.

Dr. Jasinski of Cracow has treated eighty-six cases of cold abscess by means of injections through a trocar of iodoform emulsion with encouraging results. A certain number were cured by a single injection, others after two or three injections. In eleven cases after the injection the abscess broke, a large quantity of pus mixed with iodoform being discharged. These were all cured without any further surgical interference. In nineteen cases an incision had to be made, the cavity was then washed out with carbolised water, iodoform emulsion injected, and the wound sewn up after a drainage-tube had been inserted. In some of these cases the injection had to be repeated several times. Though 180 grammes of a 10 per cent. emulsion were injected at once no toxic symptoms were ever observed.

ICHTHYOL IN GYNÆCOLOGY.

Dr. Freund, first assistant in the gynæcological clinic at Strassburg, has found ichthyol of considerable use in parametritis, perimetritis with effusion, cicatrisation of the vagina and os, chronic metritis, inflammations of the ovaries and Fallopian tubes, ulceration of the os and pruritus vulvæ. He uses the drug internally in the form of pills and externally as a 5 per cent. solution in glycerine applied on cotton wool; also with lanolin as an application to the abdominal walls, and made up into suppositories with cacao butter. In many cases he has obtained excellent results, notably in one where there was an extensive effusion into the pouch of Douglas, which was entirely absorbed in sixteen days, ichthyol being used both internally and externally. In no case was any untoward result noted. The disagreeable smell of the ichthyol was covered by the addition of cumarin.

PROPOSED HOSPITAL FOR BACUP.—At the monthly meeting of the Town Council, held on the 7th inst., Councillor Simcock expressed the opinion that the present joint hospital at Sourhall was at an inconvenient distance (six miles), and that there should be a hospital within the borough. He thought, in view of the recent generous gifts to the town, that the necessary funds by voluntary contributions might be raised to erect a hospital, and, as a common working man, he would give £20 towards that object—an example which the Mayor hoped would be generally followed.

ON A REPORT ON "LEPROSY IN THE AUSTRALIAN COLONIES;"[1] WITH REMARKS.

BY PHINEAS S. ABRAHAM, M.A., M.D., B.Sc., F.R.C.S.I.

IN a paper read before the Epidemiological Society of London, in May, 1889, I called attention to the scanty official information at our disposal with reference to the actual prevalence of leprosy in many of our colonies and dependencies. For instance, with the exception of Victoria, where the subject had been engaging some notice, the Australian Government Reports contained no reference to the disease; and I was definitely told at the office of one of the Agents-General that the disease was quite unknown in his colony. Since, however, the stimulation of the public interest by the sad death of the devoted Father Damien, the news of which was telegraphed to us a few days after my paper was read, the Colonial authorities have been nearly everywhere bestirring themselves, and within the last few months many careful valuable reports on the subjects of leprosy have been issued.

An important document, an epitome of which is appended, has recently emanated from the Board of Health Office in Sydney, and has been kindly sent to me by Dr. Samuel Knaggs of that city. There are several points in connexion with the disease which are well illustrated in this ably compiled report, but I shall only allude to one. The illness of one of the European cases is apparently believed to have started with a traumatic injury of the finger, which "swelled and never recovered its natural size and appearance." In the records of certain asylums, or in papers on leprosy, are also to be found occasional accounts of the affection, dating from a sore or cut which would not heal. Thus one of the patients included in the report of the Tarn Taran Asylum[2] is stated to have been wounded on the buttock by a sharp stone; an ulcer resulted, which did not heal for four years, the part then becoming anæsthetic. Small blisters formed subsequently on other parts of the body, and absorption of the digits and anæsthesia of the extremities set in. Two other cases in the same institution are said to have commenced by fissures on the feet; and another dates her disease to a prick on the thumb, supposed to have been inflicted by a snake. The remarkable case of leprosy which was successfully treated by Dr. Phillippo in Jamaica, and which has now remained cured for upwards of five years, is also an instance in point. The youth cut his toe while bathing, an obstinate sore resulting, the toe swelling, and giving trouble for two years before the obvious symptoms of the disease became manifest. Of course the histories may be defective, but can we say definitely that these cases are not examples of possible inoculations of leprous poison through a broken surface?

Short Abstract of Report.

The total number of lepers under official cognisance at the close of 1889 was 30—there being in New South Wales 12 (9 Chinese, 1 Javanese, and 2 white); in Victoria 4 (Chinese); in South Australia 2 (Chinese); in Queensland 6 (4 Chinese, 1 Malaccan, and 1 from the Straits); in West Australia 1 (Chinese); in Fiji 5 (2 Fijians, 2 New Hebrides, and 1 Solomon Island). Although there is a comparatively large Chinese population in Tasmania, no case has been known. In New Zealand there are no lepers under treatment in any hospital, but there is reason to believe that it exists in several districts among the native race. In most of these places there is an attempt at isolation or segregation, but in New South Wales, New Zealand, Queensland, and Fiji there are at present no laws or regulations in force dealing with lepers. In New South Wales the majority of the Asiatics developed the disease in periods varying from six months to four years after arriving in the colony. In one case, however, six years, in another seven years, and in a third ten years elapsed between the time of arrival and the appearance of leprosy.

In addition to the two cases of European parentage now under care, the death of another was reported in 1889, and there is reason to believe that there are several others in the colony under no official cognisance or care. Particulars of the two cases of European extraction are given in the Appendix, from which it will be seen—(1) that the patients are natives of New South Wales, and have never been out of the colony; (2) that they are both sons of persons of British extraction, who were either born in, or have spent all their lives in the colony; (3) that they are members of large families, none of whom are affected with leprosy, and that there is no evidence of the disease being hereditary; (4) that they have always been in a position to obtain a full and varied dietary; (5) that the disease existed in one case for eight years, and in the other for four years, before report was made to the Board of Health and the patients isolated; (6) that in both cases there has been communication with the Chinese, and though there is no satisfactory evidence that this communication was other than of a very casual character, there is some reason to believe that in one of the cases it was of an intimate nature.

[1] Issued from the Board of Health Office, Sydney, 1890.

[2] An abstract of the Tarn Taran report, and an account of Dr. Phillippo's case, were presented to the Epidemiological Society in January this year.—P. S. A.

THE LONDON HOSPITAL.

THE Committee of Management of the London Hospital, in view of the increasing strain which yearly taxes the resources of this institution, have for some time past been considering the advisability of enlarging and remodelling the building. The hospital authorities, after consulting Dr. Louis Parkes, of the University College Hospital, and Mr. Rowland Plumbe, have determined to remodel the whole sanitary arrangements of the hospital, to put in new drains, entirely on hygienic principles, to take out all imperfect watercloseta and sinks, soil pipes and waste pipes, and to have them replaced with appliances of the most approved sanitary character. Turret blocks are to be built to the old wall of the hospital, to contain the closets, bath and slop sinks, the fæces and urine for examination, which will be cut off from the bedrooms by ventilated passages. The estimated cost of this improvement is something like £7000. The whole subject of sanitation of this hospital has been considered in detail, and the works will be begun forthwith.

The necessity for the building of a new wing to the hospital was very apparent, inasmuch as the provision for the receiving room and for staff purposes as now existing, though quite sufficient when the hospital contained only 200 or 300 beds, has become altogether inadequate now [that the hospital contains 780 beds, and in times of pressure 815. The new building will consist of a large block eighty feet in width by fifty feet projection, and will bring the centre of the hospital out almost to the street. A covered way of access has been provided, so that cabs can approach the street entrance under cover, and practically on a level with the new hall. On the right hand side of the hall there will be a receiving room twice as large as that which originally existed, and out of which there will be proper examination rooms for male and female patients, the receiving officer's room, and the nurses' room, which renders it unnecessary for nurses to leave the receiving room. On the left hand side a large room has been provided for the students waiting for the surgeons and physicians with whom they are to go round the wards. In the basement a new set of medical baths will be provided, together with retiring-rooms and lavatories for the students and a large number of extra store-rooms, which were much required. On the first floor the old chapel, which blocked up the centre of the hospital, taking up the main corridor, and actually necessitating the wards behind being used as a means of access from one side of the hospital to the other, is now to be removed. It will be thrown out to the front, detached from the hospital, and approached by corridors.

The operating theatre at present existing was totally inadequate to accommodate the number of students attached to the medical school, and advantage is taken of the removal of the chapel to provide a theatre large enough to afford standing room for 250 students. The old theatre is to be utilised as an anæsthetising room, with a waiting-room attached. The surgical appliances and arrangements will be fitted under the immediate superintendence of the surgical staff. The students' platforms are arranged in amphitheatre form, and entrances are provided from the

outside corridor. Attached to this theatre is a consulting-room for surgeons and physicians. The theatre is two floors high, is lit and ventilated from the roof, besides which a window will be placed at the back of the operating table. Adjoining this theatre is a large theatre for clinical teaching, which has hitherto not existed in the hospital, and which has been a long-felt want. It is 40 ft. long by 23 ft. wide, and is built to accommodate 150 students.

Though no general appeal is being made to meet the expenses of the new buildings, a special fund has been opened, and contributions thereto are earnestly solicited, for the committee feel that the supporters of the charity will be anxious that the patients may derive the fullest benefit from their stay in the hospital. The following contributions have already been made: Messrs. Truman, Hanbury, and Co., £500; Messrs. Rothschild, £500; Messrs. Mann, Crossman, and Paulin, £300; Messrs. Ind, Coope, and Co., £200; Mr. G. Hibbert, £50; Dr. J. Langdon Down, £31 10s; Mr. Arthur Wagg, £31 10s.; Mr. M. R. Pryor, £20; Miss Goldsmid, £10 10s.; Messrs. D. Sassoon and Co., £5 5s.; the Earl of Meath, £5; Mr. E. Murray Ind, £25.

On Tuesday, the 20th, these works were inaugurated by the Duke of Cambridge, who laid the foundation stone of the new wing. The Duke was conducted to a large marquee, which was crowded by hundreds of spectators. Mr. Murray Ind read an address setting forth the need for the extension and the nature of the work. His Royal Highness said in reply: In acknowledging the compliment which has been paid to me by the committee, I can only assure them and you who take an interest in this hospital that whenever I can do anything for its advantage I shall always be found willing and ready to do so. I have had an opportunity of ascertaining the special object for which this new wing, or rather this new portion of the building, is about to be erected, and it strikes me that it is absolutely essential in connexion with the advance of knowledge and science in this hospital that such an addition should be made. No doubt it requires a considerable outlay, but I should imagine that outlay is perfectly justified. There is no intention to add to the number of beds. I know that many think that hospitals ought not to be too large, and I am not sure whether possibly that is not the correct view, though I must admit that in this part of London, where there is such an enormous population, and where accidents are frequent and unavoidable, further hospital accommodation is needed. Therefore, if such accommodation were provided here or elsewhere, it would have its advantages, but it might have its disadvantages; and therefore I think that the managers and committee have come to a wise conclusion in taking, at all events, the proper steps in improving the requisite accommodation by carrying on the hospital in a spirit of liberality and intelligence, which nowadays has been so greatly beneficial. Under these circumstances, I have no hesitation in coming amongst you and laying this foundation stone of the new portion of the building, by which I am satisfied that the medical department will be greatly benefited, and find great advantages in the new theatre which is about to be built for the accommodation of the students. The same facts apply also to the patients themselves, and, I say, taking that into consideration as the first element, and not forgetting the religious element, which is very essential, and which will be much advanced by the construction of a new chapel, I think the work is justified in every respect, and altogether to the advantage of the hospital. His Royal Highness then proceeded to lay the stone, which bore the inscription: "This stone was laid by Field-Marshal his Royal Highness the Duke of Cambridge, K.G., on Tuesday, the 20th day of May, A.D. 1890." In the foundation stone is deposited a large glass bottle containing coins, a copy of *The Times*, a copy of THE LANCET for the current week, a description of the ceremony written on parchment, and the programme of the occasion. His Royal Highness then paid a visit to some of the wards, and, in his capacity as president of the hospital, wrote in the visitors' book, "I rejoice in having had the opportunity this day of laying a foundation stone for the further extension of this great and noble hospital, which has already done so much for the sick and poor of this large neighbourhood, by which I trust its usefulness will be further increased for future generations." His Royal Highness was warmly cheered as he drove away.

TRAINING OF MIDWIVES AND MONTHLY NURSES.

ON Friday, May 16th, Dr. Cullingworth presided over a meeting in connexion with the British Nurses' Association, 20, Hanover-square, when Dr. Griffith opened a discussion on the Training of Midwives and Monthly Nurses. He enumerated certain points to which he, as an examiner for the Obstetrical Society, was constantly having his attention directed, involving the duties of the nurse during natural and complicated labours. Nurses had frequently important functions to discharge, and he asked whether the education at present given to them fitted them for answering practical questions relating to the progress of a labour case—the management of the first stage, the detection of the size of the uterus, and the expression of the placenta. Did they feel secure in stating when a retained placenta was in the uterus, normally or abnormally adherent, or whether it lay in the vagina? or did they know how to manage a case in which hæmorrhage had already begun? Technical terms formed a very great difficulty with pupil nurses, and he had observed that the mechanism of labour was for the most part very imperfectly understood by them, a fact which was probably due to defective teaching. He advocated that monthly nurses should be taught to recognise deviations from an ordinary case of labour, for he supposed that very few of them who had been long in practice had not been required to manage a labour on their own responsibility. If difficulties arose, it might be found that their training was inadequate to cope with the responsibilities which they might meet with. Instead of having these two classes of nurses, he thought it would be more rational if there were different grades of the same class. He referred to the present cost of training midwives and monthly nurses as a matter of great importance, and suggested that it might be considerably diminished with advantage to all concerned. The examinations at present were not practical enough, and he looked forward to the time when all midwives would be examined in the wards of a lying-in hospital. Dr. Wynn Westcot, Dr. Bedford Fenwick, Miss Homersham, and others having taken part in the debate, Dr. Cullingworth thought the terms very often unnecessarily placed a difficulty in the way of pupil monthly nurses and midwives, and suggested that this was an opportunity for Dr. Griffith to undertake the task of preparing a good manual. None of the existing manuals were entirely free from objection, and this was a department where a good manual was required perhaps more than any other. He found that on the question of the mechanism of labour the midwives showed that they knew a great deal more about it than the average medical student. They worked very hard, and very seldom indeed presented themselves for examination without a knowledge of parturition that certainly would do credit to a good many of our students. The question of training of monthly nurses had occupied his mind a good deal. It had been submitted to the Royal College of Surgeons whether they would depute their president to allow his name to be used in support of the Bill now before Parliament. A committee was appointed to go through the details and make a report, and one of its members came to him and discussed the Bill. One of the difficulties pointed out was that connected with the length of time occupied in the training. He thought that three months was an utterly inadequate time, and that it would be desirable for a body like the Royal College of Surgeons to give its adherence to a Bill which recognised that fact. At any rate, the time was insufficient, but as things were at present he doubted whether insisting on a longer period would not defeat the object of the Bill. A great want of trained midwives was felt in the country districts and in the lower and poorer districts of large towns. But the women who were likely to take up this work in remote country districts were not those who had much time to spare for training. The practical outcome would be a vast amount of illegal practice. Some years ago a Bill was before Parliament on this same question. The result of the inquiry was published in a Parliamentary paper, which those interested in the present Bill would do well to possess. He believed it would be very difficult to arrange for the examination of midwives in the wards of a hospital. The University of Edinburgh was

the only examining body in the British Isles at which there was any practical examination in obstetrics by the bedside. If this was instituted some crotchety person would be sure to raise an outcry against people not merely learning their profession, but absolutely having their knowledge tested on these poor people. They should never be satisfied until the training of midwives and monthly nurses involved a preliminary general training in a general hospital, but at present he did not think it was a practical question. The time was not quite come to insist upon it, though it would be opportune to advise it in individual cases. The proposal was in accordance with the general rule that runs through all education: first the general, then the special; first the simple, then the complex—a rule which in this department was continually broken; and he thought that the tendency must be towards the rectification of what was a thoroughly bad principle. The meeting adjourned after the usual complimentary votes.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On Diphtheria at Berkhampstead, by Dr. BLAXALL.[1]—This outbreak attracted especial notice on account of the existence in this small Hertfordshire town of the well-known King Edward's Grammar School, where there are ninety-eight boarders and ninety-two day scholars, and because of the rumour that both the town and the school were suffering owing to the defective condition of the method of public sewerage. The prevalence commenced about the third week of September of last year, this being also the date of the reassembling of the school. As regards the origin of the disease, Dr. Blaxall, with the aid of the local health officer, Dr. Thompson, and the medical practitioners of the town, ascertained that a day boy, H. T——, was kept at home from September 24th to October 16th on account of throat illness. He belonged to a family liable to sore-throat, and early in October his mother, who had in early life had diphtheria, a sister, and also a brother who continued his school attendance, all likewise suffered, two of them subsequently exhibiting diphtheritic paralysis. After this no recognised diphtheria was heard of in the town until December 3rd. But, including the boys referred to, some eighteen scholars, nearly all boarders, suffered from some sort of throat illness, some so slight as hardly to be recognised as involving the throat at all. But on December 3rd the character of the disease suddenly changed; it became virulent and fatal. On that day a boy was attacked who died on the 13th; within two days three more boarders were attacked; then a boy who had an unrecognised nasal attack was sent home, with the result that the infection was communicated in a fatal form to his mother and a sister. On Dec. 9th a master, on the 11th 6 boarders and a day scholar, and on the 23rd 2 more boys were attacked. On the 14th the school was broken up, 2 boarders being subsequently attacked. In all, there were 40 cases of throat illness, including 30 boarders and 4 day scholars, several of the boys dying as the result. The other inhabitants of the town, including children attending the Board school, escaped; such cases of "mumps" as had occurred early in September having, according to Dr. Blaxall, no relation with the throat ailment. In seeking a cause for this outbreak, Dr. Blaxall feels that he must exclude the admitted offensiveness of the sewers in Castle-street, and also some obvious defects in H. T.'s house, and this because many others equally exposed to those conditions escaped, whilst the incidence of the disease was essentially on the inmates of the school. So also milk supplies, food, antecedent disease in animals, could not be regarded as accounting for the outbreak. The actual date for the reassembling of the school was Sept. 18th, and the question naturally arises whether H. T——, who was not attacked till the 24th, did not himself become infected at the school rather than serve as the first cause of infection to his fellow-scholars? And looking to the history of some of the throat ailments which were complained of amongst the boys towards the end of September, Dr. Blaxall is evidently inclined not to regard the date at which the complaint was first made as the date at which a sore-throat capable of being communicated to others first manifested itself. And in this connexion there is the circumstance, significant in the history of a diphtheria prevalence, of a boy who had had diphtheria five years ago, who had since then frequently suffered from sore-throat, and who was amongst those who ailed towards the end of September last. As to the subsequent spread of the disease, the story of the sore-throats, at first undefined and then suddenly assuming a virulent form, amply suffices for an explanation. And the school authorities are the more to be sympathised with because it is not long since the present headmaster placed the sanitary circumstances of the main school buildings on a footing that leaves but little to be desired. Two outside boarding houses were not found so faultless, and these will doubtless be dealt with, if the needed works have not, indeed, already been carried out. As to the town itself, the inquiry has revealed that it possesses a system of sewerage and drainage "of a most defective character ..... and a method of disposal of sewage fraught with nuisance injurious to health." In short, Dr. Blaxall reports that the Berkhampstead rural sanitary authority have failed in this respect to fulfil the requirements of the Public Health Act, that the present state of affairs is "a standing cause of offence and other danger to health," and that the evil is not limited to the town, since the waters of the canal are polluted "with foul and dangerous sewage." It is earnestly to be trusted that Dr. Blaxall's recommendation to the effect that a skilled engineer should forthwith be called in to advise on these matters will be acted on, and that the dangerous conditions referred to will be remedied with the least practicable delay.

[1] Eyre & Spottiswoode, East Harding-street, E.C.; Adam & Charles Black, Edinburgh; Hodges, Figgis, & Co., Dublin. Price 3d.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5646 births and 3704 deaths were registered during the week ending May 17th. The annual rate of mortality in these towns, which had declined in the preceding four weeks from 20·9 to 19·2 per 1000, rose again last week to 19·9; the rate was 17·3 in London and 22·0 in the twenty-seven provincial towns. During the first seven weeks of the current quarter the death-rate in the twenty-eight towns averaged 20·2 per 1000, and was 0·9 below the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 11·9 in Birkenhead, 13·1 in Brighton, and 15·5 in Nottingham. The rates in the other towns ranged upwards to 26·8 in Sheffield, 28·6 in Sunderland, 32·4 in Bolton, and 35·0 in Manchester. The deaths referred to the principal zymotic diseases, which had been 418 and 403 in the preceding two weeks, rose again last week to 467; they included 150 from whooping-cough, 130 from measles, 55 from scarlet fever, 50 from diarrhœa, 44 from "fever" (principally enteric), 38 from diphtheria, and not one from small-pox. The lowest death-rates from these diseases were recorded in Hull, Halifax, and Leicester, and the highest rates in Birmingham, Manchester, Cardiff, and Derby. The greatest mortality from measles occurred in Wolverhampton, Cardiff, Birmingham, and Derby; from scarlet fever in Manchester, Oldham, Sunderland, and Bolton; from whooping-cough in London, Cardiff, and Derby; and from "fever" in Norwich. The 38 deaths from diphtheria in the twenty-eight towns included 21 in London, 8 in Salford, 3 in Manchester, and 2 in Liverpool. Three cases of small-pox were under treatment in the Metropolitan Asylum Hospitals at the end of the week, and not one in the Highgate Small-pox Hospital. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 1102 at the end of last week, against 1102 and 1087 on the preceding two Saturdays; the new cases admitted during the week were 131, against 95 and 131 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding five weeks from 384 to 301, were

300 last week, and corresponded with the corrected average. The causes of 79, or 2·1 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Oldham, Blackburn, Cardiff, and in six other smaller towns. The largest proportions of uncertified deaths were recorded in Liverpool, Salford, Birmingham, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 26·9 and 24·2 per 1000 in the preceding two weeks, further declinedto 20·6 in the week ending May 17th, but exceeded by 0·7 that which prevailed during the same week in the twenty-eight English towns. The rates in the eight Scotch towns ranged from 14·1 in Perth and 15·9 in Edinburgh to 22·7 in Aberdeen and 23·6 in Glasgow. The 534 deaths in the eight towns showed a decline of 91 from the number in the previous week, and included 32 which were referred to measles, 23 to whooping-cough, 9 to diarrhœa, 6 to scarlet fever, 5 to diphtheria, 1 to "fever," and not one to small-pox. In all, 76 deaths resulted from these principal zymotic diseases, against 104 and 118 in the preceding two weeks. These deaths were equal to an annual rate of 2·9 per 1000, and exceeded by 0·4 the mean rate last week from the same diseases in the twenty-eight English towns. The highest death-rates from these diseases were 3·5 in Glasgow and 4·0 in Leith. The fatal cases of measles, which had risen from 31 to 46 in the preceding three weeks, declined again last week to 32, of which 20 occurred in Glasgow, 5 in Dundee, and 4 in Edinburgh. The 23 deaths referred to whooping-cough showed a marked decline from those recorded in recent weeks, and included 8 in Glasgow, 6 in Aberdeen, and 4 in Edinburgh. The 6 fatal cases of scarlet fever were within two of the number in the preceding week, and included 3 in Leith. The deaths from diphtheria, which had been 8 and 4 in the previous two weeks, rose to 5 last week. The deaths referred to diseases of the respiratory organs in the eight towns, which had been 159 and 129 in the preceding two weeks, further declined to 108 last week, but exceeded by 14 the number in the corresponding week of last year. The causes of 45, or more than 8 per cent., of the deaths in the eight towns were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·4 and 23·6 per 1000 in the preceding two weeks, further declined to 22·5 during the week ending May 17th. During the first seven weeks of the current quarter the death-rate in the city averaged 24·4 per 1000, the rate for the same period being 18·0 in London and 20·9 in Edinburgh. The 152 deaths in Dublin last week showed a decline of 8 from the number in the previous week; they included 4 which were referred to "fever," 3 to measles, 2 to whooping-cough, 2 to diarrhœa, 1 to scarlet fever, and not one either to small-pox or diphtheria. Thus the deaths from the principal zymotic diseases, which had been 13 and 10 in the preceding two weeks, rose again to 12 last week; they were equal to an annual rate of 1·8 per 1000, the rate from the same diseases being 2·6 in London and 2·5 in Edinburgh. The fatal cases of "fever," which had been 4 and 3 in the previous two weeks, rose again to 4 last week. The 3 deaths referred to measles showed a slight further increase upon recently weekly numbers; and the 2 fatal cases of whooping-cough were within one of the number recorded in the preceding week. Four inquest cases and 5 deaths from violence were registered during the week; and 47, or nearly a third, of the deaths occurred in public institutions. The causes of 14, or more than 9 per cent., of the deaths in the city were not certified.

THE SERVICES.

Deputy Surgeon-General A. Allan has been appointed Principal Medical Officer on the Staff at Dublin.

ARMY MEDICAL STAFF. — Brigade Surgeon Richard William Berkeley has been placed on retired pay (dated May 6th, 1890); Surgeon William Perceval Gore Graham, M.B., has been seconded for service with the Egyptian Army (dated May 5th, 1890).

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon and Honorary Surgeon-Major John Jas. Saville, North Somerset Yeomany Cavalry, to be Surgeon-Major, ranking as Lieutenant-Colonel (dated May 21st, 1890).—The undermentioned Officers to be Surgeons, ranking as Captains (dated May 21st, 1890): Surgeon Thomas Philip, M.B., 1st Volunteer Battalion, the Princess Louise's (Argyll and Sutherland Highlanders); Acting Surgeon William John Lawrie, M.D., 2nd Volunteer Battalion, the Royal Scots Fusiliers.

BENGAL MEDICAL ESTABLISHMENT.—Deputy Surgeon-General William Roche Rice, M.D., to be Surgeon-General (dated March 29th, 1890); Brigade Surgeon Jesse Griggs Pilcher to be Deputy Surgeon-General (dated March 29th, 1890).

The Queen has approved of the retirement from the Service of the following Officers:—Surgeon-General Sir Benjamin Simpson, M.D., K.C.I.E., Bengal Medical Establishment (dated March 29th, 1890); Surgeon-General George Bidie, C.I.E., Madras Medical Establishment (dated April 11th, 1890); Brigade Surgeon Charles Frederick Oldham, Bengal Medical Establishment (dated Feb. 28th, 1890); Brigade Surgeon Edward Ambrose Fitzgerald, Bengal Medical Establishment (dated March 18th, 1890); and Brigade Surgeon George Dalziel Riddell, Madras Medical Establishment (dated April 2nd, 1890).

ADMIRALTY.—The following appointments have been made:—Surgeon Patrick B. Handyside to the *Camperdown*, and Surgeon James M'C. Martin to the Royal Marine Light Infantry Division, Portsmouth (both dated May 22nd, 1890); Fleet Surgeon Walter Reid, M.D., to the *Camperdown* (dated May 22nd, 1890).

VOLUNTEER CORPS.—*Rifle:* 5th (Irish) Volunteer Battalion, the King's (Liverpool Regiment): Surgeon-Major (ranking as Lieutenant-Colonel) J. Finegan resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated May 17th, 1890).—3rd Volunteer Battalion, the Norfolk Regiment: Acting Surgeon C. R. Whitty, M.D., to be Surgeon (dated May 17th, 1890).—1st (Cumberland) Volunteer Battalion, the Border Regiment: James Macdonald, M.B., to be Acting Surgeon (dated May 17th, 1890).—5th Volunteer Battalion, the Durham Light Infantry: Acting Surgeon C. J. Sutherland resigns his appointment (dated May 17th, 1890).

Correspondence.

"Audi alteram partem."

HYPNOTISM.

To the Editors of THE LANCET.

SIRS,—In a recent leading article on hypnotism you allude to it as a revival of the old mesmerism, which soon passed into various phases of quackery and superstition. Dr. Simms has called attention to the fact, however, that the subject was investigated in a genuinely honest and scientific spirit by a committee of Indian medical men appointed by the Government to report on the methods being practised by Dr. Esdaile in the performance of painless surgery. "By order of the Deputy-Governor of Bengal, dated the 31st July, 1846, the following gentlemen were appointed a committee to observe and report upon surgical operations to be performed by Dr. James Esdaile upon patients under the influence of alleged mesmeric agency: J. Atkinson, E. M. Gordon, J. Jackson, D. Stewart, W. B. O'Shaughnessy, James Hume, A. Rogers." On Oct. 9th they had their first sitting, and made their report, Dr. O'Shaughnessy being the secretary. Dr. Esdaile did not himself mesmerise, but employed native assistants, and the process took several days to complete, generally about two hours daily for a week. Some persons failed to be influenced. The patient lay on his back, the mesmerist seated behind him at the head of the bed, leaning over him, the faces of both nearly in contact; passes were made with one or both hands along the face, chiefly over the eyes. The mesmerist breathed frequently and gently over the patient's lips, eyes, and nostrils. When he was at last affected, he appeared to be in a deep sleep; he could not be roused by loud noises; the pupils were inactive to light, and apparently there was perfect insensibility to pain on burning, pinching, and cutting the skin. The mesmeriser finally awoke the patients by blowing

on their face. On the first trial ten male Hindoos were operated on, mostly for elephantiasis scroti.

The first case was that of removal of a tumour. During its excision the patient never moved, nor did his countenance change, and when he awoke he declared he had no recollection of the operation. In another case of amputation of the thigh for gangrene no sign of pain was evinced. In a third case of severe operation the patient moved about, but, on awaking, said he knew nothing of what had been done. In a case of double hydrocele the patient made no expression of pain when the trocar was thrust in. In those cases where movements took place, and the face altered in expression during the use of the knife, the patients, without exception, declared they had no knowledge of any operation having been performed. After this, the committee had several sittings, during which operations of various degrees of severity were performed, and on most occasions there were certain persons who failed to be influenced by the mesmeriser. Some very severe operations were undertaken on mesmerised patients without their being at all conscious of what was being done. One man had a large scrotal tumour removed, and when he was awakened he was asked as to the nature of his disease, and why he had come to the hospital. He answered to have the tumour cut off, and when the cloth was removed and he found it gone, he said he knew nothing of it, and exclaimed: "My life is saved! It is the work of God." Another patient who had been mesmerised was brought into the room, and was pricked all over with the point of a knife, even to the fetching of blood, but no manifestation of consciousness took place. Sometimes the mesmerist seated himself immediately before the patient, their faces almost touching, and then passes were made over him. In one case deep sleep came on in ten minutes, the pupils were contracted to a point and the eyeballs drawn to the inner corner of the orbits. In most of the other cases the pupils were described as natural in size. All the members of the committee were satisfied with the facts, and suggested further investigations. I would recommend all those interested in the subject of hypnotism to read this valuable report of the committee appointed by the Indian Government in 1846.

I am, Sirs, your obedient servant,

May, 1890. SAMUEL WILKS.

THE PLACE OF THE MEDICAL FACULTY IN THE FUTURE UNIVERSITY FOR LONDON.

To the Editors of THE LANCET.

SIRS,—The question of organising the university institutions of London appears to be approaching its final stage. The place which is to be held in the University by medical institutions and interests, and the remedy to be provided for existing medical grievances, appear as yet undecided. A proposal was mentioned in your issue of the 10th inst., that, as there will be in future two separate committees of the Senate administering respectively the system of graduation by open examinations and the new system of the teaching side, there should further be instituted a third committee for medicine, to administer the system of graduation in that faculty separately. In favour of this plan many considerations are likely to be urged, from what I will take leave to call the institutional point of view, by members of the University, of the medical profession, and of the University Colleges. But I submit that the interest of the student makes rather for organisation than for separation; and that it is the interest of the student which in such a matter we are bound in the first place to regard.

Let it be considered, for instance, in what fashion the scientific branches of medical education must be administered under a separated system. Suppose these branches assigned to the Committee for Medicine; then either there must be two sets of teachers of science—one for medical students and one for general students—or else the teachers must acknowledge the authority of two separate administering committees, one in respect of their medical pupils, one in respect of the others. Suppose them assigned to the Faculty of Science; then medical students would have to study under a system of which half was controlled by one body and half by another. Again, the Committee for Medicine will be the loser by the absence of those responsible for efficiency in the Faculty of Science; and the committee for the teaching side will be weakened by the insufficient representation of medical interests. Where things are so intimately connected as the faculties of a university must be, it is matter of common sense to place them under the same responsible administration. Mutual representation, of each committee upon the other, may lessen friction; but friction of this kind ought not to exist. The power of appeal to an ultimate authority, such as in this case would be afforded by the Senate, may prevent an absolute deadlock; but it will not prevent the emergence of differences, which ought to be dealt with within the administering body itself.

Under a single committee for the teaching side, upon which all interests were fairly represented, there would be subcommittees, boards of studies, and boards of examiners, as they were wanted. But if the Medical Faculty is isolated by Charter, isolated it must remain. In the present movement we have been attempting all along to remedy evils due to dislocation as between institution and institution. Do not let us set up a new dislocation as between faculty and faculty. Of the two divisions, the vertical and the lateral, it is difficult to say which would be the worse. We do not want a teaching university in water-tight compartments. I am compelled to be brief, but there are among your readers those who can see how these remarks might be further developed; meantime, I will only add that I believe them to embody the opinions, not of a single individual, with no special qualifications to speak on medical matters, but of many high authorities.

I am, Sirs, yours &c.,

May 17th, 1890. GEORGE YOUNG.

STRICTER CONTROL FOR HOSPITAL STAFFS!

To the Editors of THE LANCET.

SIRS,—In the report of the evidence before the Committee of the House of Lords in *The Times* of Saturday, May 17th, Mr. Bousfield is reported to have said that "it would be better if the control over the medical staff was stricter"—a rather strong remark for a member of a hospital committee to make, and one which involves principles of great importance to the poor, to the public, and to the profession. In it, if I am not mistaken, more is implied than is expressed. Is this opinion of Mr. Bousfield founded upon experience gained at King's College Hospital, of the committee of which institution he and I have long been members, and upon which eight members of the medical staff sit? Does Mr. Bousfield think that the interests of the poor, the cause of charity, or the desires of the supporters of our hospital would be furthered by strict or stricter control of his eight colleagues and other members of the staff? If so, I beg him to state in what particulars the staff of this hospital during the past fifty years might have been made better by stricter control. After more than forty years' connexion with King's College Hospital, in different capacities, the opinion I have been led to form on matters connected with hospital management and medical charities generally is diametrically opposed to Mr. Bousfield's. Does Mr. Bousfield hold the intolerable theory that the members of the medical staff are the servants of the committee, or that all staffs should be appointed and paid by some central arbitrary hospital general management authority? So far from the influence, authority, and freedom from lay interference being diminished, every effort should be made to increase these in all medical institutions, for it is quite certain that if the several medical staffs were brought under stricter control, and arbitrarily organised into dismal uniformity, the progress so marked in every one of our hospitals would soon cease, and decadence would prevail. The work would become more and more of that routine order so dear to the would-be organisers. Mr. Bousfield and those who think with him should consider how our hospitals began, and how, under broad and generous management, they have grown to be the admiration of the world and a glory of our country. Faddy, fidgety interference under the title of "stricter control" would soon cause any institution which depends upon the continuous and harmonious working of many active and very different minds to languish and decay. The public knows that during the past twenty years the general education of members of the profession has vastly improved, and their standing among fellow-workers in various departments is now very different from what it was in days gone by. Mr. Bousfield and his friends may rest assured that at all events some of us are quite determined not to submit to any strict or stricter control. Such has not been required in the past,

and cannot now be imposed. The inviolable right of each hospital to continue the work upon its own lines must be firmly defended.—I am, Sirs, yours truly,

LIONEL S. BEALE,
Physician to and a Member of the Committee of King's College Hospital.

London, May 20th, 1890.

HISTORY AND PATHOLOGY OF VACCINATION.

To the Editors of THE LANCET.

SIRS,—On my return from Egypt I read the review of my work on the above subject in your issue of March 1st, and as the question of vaccination is attracting so much attention, owing to the appointment of a Royal Commission, I trust you will allow me to make some observations in reply.

I find the following statement in reference to the lessened mortality from small-pox. "It is surely idle to urge such reasoning [sanitation isolation, E.M.C.] in face of the fact that vaccination has been practised for three times the period that the principles of sanitation have been put in force." Surely your reviewer can scarcely have read the chapter on Haygarth's system of preventing small-pox. Nearly twenty years before the introduction of vaccination Haygarth taught that men were not necessarily subject to the small-pox, and that it could be avoided by observing certain rules. And not only had Haygarth's teaching a great effect on the profession and the public, but his scheme was actually carried out in Chester with great success, thus anticipating by more than a century the Leicester system and its later development in Mr. Ritchie's Act. I maintain that there *were* "other circumstances" at work in producing the lessened mortality from small-pox. That small-pox was actually spread by inoculation was openly acknowledged by the leading surgeons and physicians of the day, such as Dimsdale and Adams, and a practitioner of thirty years' standing expressed his "unshaken opinion," in 1801, that "if every lancet had been confined to venesection, or to other operations equally simple, for only half a century past, we should by this time, judging from physical events, in all human probability have known as little of small-pox as we now do of the plague, sweating sickness, scurvy, &c." Cow-pox inoculation by superseding small-pox inoculation was undoubtedly of great service in getting rid of this fertile source of small-pox. And it was some "other circumstance," and not cow-pox inoculation, which enabled Dr. Adams, F.R.S., physician to the London Small-pox Hospital, to write in 1807, "there are men in the highest practice in London who have rarely had occasion to visit a small-pox patient."

With regard to the case of John Baker, I still think that, as I have stated in my work, most probably (p. 273) the child died of the effects of the inoculation. We must not only take into account the state of the child's arm, and that, as admitted, he did die very shortly after the experiment; but we must remember that it was an experiment with equine lymph. It was a case of virulent horse-pox, and studying this case side by side with Amyot's and other similar cases, I repeat that we are justified in regarding it as a fatal case of horse-pox. Dr. Creighton did not arrive at this conclusion, nor did he follow up the case very fully in "Cow-pox and Vaccinal Syphilis;" but after the publication of this work I independently collected all the evidence I could find from my great interest on the subject of horse-pox. The conclusion at which I arrived agrees to a certain extent with Dr. Creighton's final opinion as expressed in "Jenner and Vaccination." Again, let me remind your reviewer that while Dr. Creighton was the first in this country to bring into prominent notice the affinity between cow-pox and syphilis, we must not forget the labours of Auzias-Turenne in France, who for more than twenty years investigated syphilis, cow-pox, and horse-pox; his classical papers being published from about 1844 to 1867.

In conclusion, I still maintain that there is no scientific support for what is generally understood by "vaccination," and that the practice is destined in more enlightened times to fall into desuetude, being replaced by the more rational and comprehensible procedure of the compulsory notification of small-pox and the isolation of all cases of this disease, or, in other words, the stamping-out system.

I am, Sirs, yours obediently,

EDGAR M. CROOKSHANK.

Manchester-square April 16th, 1890.

"THE PREVENTION OF RABIES AND HYDROPHOBIA."

To the Editors of THE LANCET.

SIRS,—Adverting to an article headed as above, which you lately were so good as to publish in your columns, may I ask you kindly to admit the following remarks in reply to comments made thereon by correspondents who have addressed you?

The points to which my attention has been directed by my critics are the following—namely: (1) The grounds upon which the belief is based that hydrophobia in man is not the same affection as rabies in dogs; (2) that hydrophobia may occur in the absence of a bite, whether by a rabid or non-rabid animal, or any other physical injury; (3) it is pointed out that rabies has been "got rid of" or "stamped out" in certain countries; (4) also that rinderpest or cattle plague and certain other epizootics have similarly been "stamped out." I desire to take each of these points in its order: (1) Blaine, writing in 1824, referred to the then "exploded theory" that rabies and hydrophobia were the same disease in cause, appearance, and effect. He alluded also to "the laboured attempt" being made "to force the human and the brute malady into one parallel"—an attempt which he described as being "at variance with truth." According to M. Pasteur, "nothing is more varied than the symptoms of rabies; each case has, so to speak, its own peculiar ones." That is to say, indefinite phenomena are variously grouped under a specific designation. As pointed out by Dr. Spitska, "even M. Pasteur has not enumerated the precise symptoms in man which he considers to be characteristic of hydrophobia." So that here also we find that indefinite characters are arbitrarily grouped together, a definite name being applied to the resulting *mélange*. Accordingly the theory of identity of the two disorders implies that of one series of indefinite phenomena with another series also indefinite. But neither in symptoms nor post-mortem appearances is similarity, far less identity, observable between them. In cases where "hydrophobia" occurs in persons who have been bitten by "rabid" animals the proportion attacked with the former malady is small as compared with those who escape; and in those who suffer the intervening interval is variable and irregular; whereas after inoculation with a specific animal poison or virus, as snake venom, vaccine, &c., the resulting phenomena are constant in their character and period of development. 2. By a considerable number of capable observers hydrophobia is looked upon as not being itself a specific disease due to one cause alone, but as a "condition" resulting in different cases from various causes, including traumatic injuries and nervous "shocks," as a complication in the course of various diseases, and as occurring in the absence of apparent cause. In these respects the disorder is referred to the class of maladies which includes also tetanus, epilepsy, chorea, &c. Like them, when recurring under such circumstances, there is good reason for applying the term "spontaneous" or "idiopathic" to hydrophobia unconnected with traumatism. Details in support of this contention occur in writings by Combes, Lutaud, Dolan, Dulles, and other authors, and in my two *brochures* on "Rabies and Hydrophobia," published respectively in 1887 and 1888. 3. The chronological records of rabies show clearly that in the countries named the disorder has its periods of incidence and those of absence, both of which recur without reference to the neglect or adoption of "repressive" measures. There is consequently no reason to assume that the present period of immunity differs in character from those which have previously happened. In Sweden there was an epidemic of rabies in 1824, apparently the first known, and another in 1851–2. According, also, to the views expressed by so high an authority as my esteemed friend Dr. Fleming, C.B., "It would not be prudent to conclude that the facts are sufficient to warrant the conclusion that the means of preventing the appearance of hydrophobia in persons who have been bitten by mad dogs have yet been discovered." 4. An article in the latest edition of the Encyclopædia Britannica contains the following sentence: "Among cattle indigenous to the regions in which 'cattle plague' may be said to be epizootic the symptoms are comparatively slight, and the mortality not great." From which statement the inference is obvious as to the easiest method of averting violent attacks of that malady.

Adverting to other epizootics mentioned, the conditions attending the process of "stamping them out"—namely, the slaughter of the infected and suspected animals—are the same in all. But that process is only effective so long as the beasts so sacrificed are unreplaced by others. When this takes place the "stamped out" epizootic reappears, to be again "suppressed" by means of the poleaxe, as before; but only until next time. The extent to which this alternate outbreak and suppression takes place may best be gathered from the following particulars, taken from a recently published account of the sums paid in compensation for animals slaughtered in the process of "stamping out" pleuro-pneumonia during the three years referred to—namely, in 1886, £36,826; in 1887, £45,158; and in 1888, £81,950. And yet stock rearers express dissatisfaction with a method which "stamps out" their flocks together with the disease from which particular animals may or may not at the time be suffering—a process altogether different from suppressing an epizootic malady while permitting animals liable to its attack to live in health, and fit to be converted into wholesome human food. How stands this theory of "suppression" in reference to the most recent examples of an epidemic disease—namely, that which, under various designations, including that of influenza, continues its course over countries and continents? It is simply "nowhere." I am, Sirs, yours &c.,

C. A. GORDON, Surgeon-General.

Westbourne-square, W., May, 1890.

THE MIDWIVES' REGISTRATION BILL.

To the Editors of THE LANCET.

SIRS,—I hope every medical practitioner will protest against this Bill becoming law, and that each one will ask his representative in Parliament to oppose it. May I be permitted to call attention to some of its defects.

On page 1, Section 1, Clause 2, a midwife is defined as "any woman of good character ..... who is capable of managing a case of natural labour ..... and of recognising any conditions requiring the aid of a medical practitioner." May I ask, Why should not men be allowed, as well as "any woman," to become midwives?" Secondly, How is a person with three months' training to diagnose a "natural labour"? Thirdly, How is she to diagnose "any conditions" requiring the aid of a medical practitioner? Would it not be better to define "any conditions"? Does this term mean malpresentations, placenta prævia, ante- or post-partum hæmorrhage, sudden collapse, or what? Suppose, in the above-mentioned cases, the midwife does not consider that there are "any conditions"—and the more ignorant she is, the more conceited will she be—what is to be done? Fourthly, the "any conditions" being recognised, Would it not be well to state who is to send, and when? Another point is that this new class of practitioners are not to be under the control of the General Council of Medical Education. Why? The "District Boards of Examination" are to consist of not more than five doctors, and each midwife must have been a pupil for three months in *some* lying-in hospital, or workhouse hospital, or have attended twenty-five cases with a doctor or midwife. If only three months' pupilage is necessary, why have doctors to attend classes for four years, and pass severe examinations? Why not three months for them also? Would it not also be better to stipulate the number of beds to be in the hospital?

Page 3, Section 4, Clause 30, says: Any woman who, at the passing of this Act, can get a certificate from two doctors may be put on the midwives' register. We have heard sufficient about the number of chemists who registered as dentists at the passing of the Dentists Act. Why perpetuate the mischief? Section 5, Clause 35, says that a midwife may recover a fee for "any midwifery operation," or "for advice," but one would think this points to duplicity of meaning when it is read along with Section 2, p. 1, where it speaks of "natural labour" only.

At page 5, Section 8, Clause 10, the fee payable is to be £2, £1 is to be retained as examination fee, while half of the other £1 is to go to the registrar. Therefore if there are five examiners they are to get the large sum of 4*s.* each. This beats the American diploma mills! No doubt eminent examiners will have sufficient time at 4*s.* a midwife—that is, if they can examine and pass at the rate of thirty an hour. Might I ask, Can a midwife sign a death certificate, or a certificate of stillbirth under this Bill? or can she give an anæsthetic? Is she qualified to resuscitate an infant? Can she administer "any drugs," and, if so, what is a drug in the meaning of this Bill? Is she qualified to pass a catheter, or to irrigate the uterine cavity? How long is she to remain with a case after labour is over? What is her fee to be, and does it include subsequent visits? How long is a case to be in labour before she "recognises conditions" requiring help? Can she engage an unqualified assistant or take pupils? Women have never asked for this Bill. The profession has not asked for it; while the public are content. Who then is pushing it? Why, the Midwives' Institute of London, which is a body composed of lady doctors, hospital matrons, and nurses. This Bill is the narrow end of the wedge which is finally to dismiss all medical men from midwifery work. If it is passed, I should like to know, How are medical students to secure the necessary training? As it is, there are not sufficient cases. Again, how is the young practitioner to obtain a full knowledge if he is first of all to be called in only to difficult cases? By all means let us have registered nurses—a local registry. This we have at present in all our towns. May I just add that, if there is a consulting physician in London, who is trying to push this Bill through, he should surely take the opinion of his brethren both in London and in the provinces as to whether we want this new class of midwifery practitioners. For my part, I hope each local body of practitioners will send up petitions through their Parliamentary representatives against this Bill. Midwifery has been brought to its present high position by the untiring skill and energy of the profession. On the other hand, there is little doubt that if it fall back into the keeping of midwives, "who have attended twenty-five cases" of labour, the terrible puerperal mortality of former times would soon reappear. The case for midwives is quite different in Russia and certain parts of Prussia where doctors are scarce, and where the Government appoints and pays the midwives, much as we pay the Poor-law medical officers. But in this country every locality has its doctor, and, therefore, for all practical purposes, we do not need this new grade of practitioners. Perhaps if our law-makers and legislators consulted those who should know best, they might come to a happy finding that there is such a thing as over-legislation. The present Bill marks a retrograde movement; it is uncalled for, and it is unnecessary, and the public do not want it.

I am, Sirs, yours faithfully,

Liverpool, May 18th, 1890. ROBERT R. RENTOUL, M.D.

DEATH UNDER CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—The following report of a death from chloroform which I saw may be of interest to you. Some years ago, while I was resident in Cook County Hospital in this city a woman of about thirty presented herself with a small subcutaneous fatty tumour of the face. No trouble in heart, lungs, or other organs could be found. I gave the chloroform by holding a few drops on a diaper before the nose. She went under the influence very promptly, and without struggling. As soon as anæsthesia was complete the diaper was removed, and was not replaced. The amount of chloroform given was not measured; it could not have exceeded two or three drachms. It was of Squibb's best. Everything at that time seemed favourable. During the whole of the operation I did not take my finger from the radial artery for more than a second or two at a time. At no time did I notice anything unusual in pulse, respiration, or aspect of the patient. The diaper had been removed for about a minute and the cutting had just begun, when the respiration suddenly stopped. So far as I could see, the last breath which she drew was as full and free as any of the others. When the respiration stopped the pulse was beating as usual. No perceptible change occurred in it during, perhaps, half a minute; it then became somewhat fuller; afterwards it failed, first in strength, and then in regularity. It could be felt as a feeble flutter for nearly or quite two minutes after the stopping of the respiration. All efforts at resuscitation were futile; the patient never gasped or made another motion. The necropsy, made under the direction of the coroner, I did not see. I am able to state, therefore, only that the report said that no lesion of any organ was found. I examined the heart after it had been removed; it was at that time relaxed and empty. I understood that

such was its condition when the body was opened. It was thought by some to be unusually pale and soft. It was not weighed. The valves were perfect. No fatty degeneration or other disease of the muscular fibre could be detected by the microscope.

The only comment which I have to make on the case is that I still do not see how any precaution could have been used that was not used to ward off the unfortunate result.

I am, Sirs, yours truly,

University-place, Chicago, April 29th, 1890. LESTER CURTIS.

"PUBLIC VACCINATORS AND CALF LYMPH."

To the Editors of THE LANCET.

SIRS,—That your readers might judge of the validity and fairness of your adverse anonymous criticism of my alleged position and views as public vaccinator, they and I might claim that you should either have submitted to them my signed declaration of these, or at least have given some reference as to where that could be found. How completely you have succeeded in misrepresenting me I hope you will permit me to show. A question that affects, as I think, seriously the rights of the public (in his relations with whom it might be well if no public officer ever forget that he is one of them) was raised, not, as may be inferred, by me, but by parents in this district, who, while wishing to have their children vaccinated, insisted on the use of calf lymph, to be supplied gratis, on the ground that if the State compelled it should find all the machinery (a principle that, I take it, is conceded in the creation of the N.V.E. and the whole vaccination service). I applied to the N.V.E., stating the parents' requirements and their reasons. The lymph was supplied, but I received with it a lecture, in which I was taught that the parent had nothing to do with the choice of lymph, the responsibility for which rested entirely with me. At the same time I was informed that the N.V.E. did not undertake to supply all the lymph, calf, or human, that might be required. In reply, I accepted freely the responsibility for choice of lymph, and declared that for reasons I assigned I should often give the preference to calf lymph.

In correction of your annotation, permit me to say that my letter contained no reference whatever to parents who "object to vaccination;" that such have never in any form "received sympathy or support" from me, who am at constant war with the anti-vaccinationists around me, and who, to guard against any such misapprehension, expressly declared myself in the correspondence "a thorough believer in the benefits of vaccination, having had the clearest and most convincing evidences of them during a small-pox epidemic;" that the "case for vaccination" has therefore never been called into question, and any statement of it in this discussion is quite irrelevant, though I have no doubt it was not introduced without a purpose; that I have not "shirked responsibility" of any kind, or "relieved any parent of responsibility." On the contrary, I have maintained the parent's responsibility for his child's well-being, and that this ought to be recognised when, while declaring his wishfulness to have his child vaccinated, he prefers a request, based on fact and reason, that the lymph may be of a kind free from certain known risks. As for the hesitation that my censor ascribes to me, about vaccinating such a man's child with human lymph, it is either a constructive and intentional or a random surmise, without a vestige of foundation in the correspondence or in fact. I would most willingly vaccinate the child with human lymph, collected with reasonable care, and for which I could offer personal guarantee if only the terribly wrong-headed parent would let me. Thus it is not I, but the department, that insists on "relieving such parents of responsibility," and denies their right to any voice in the selection of human or calf lymph. This responsibility, "transferred" by the department to me, I thankfully accepted as a very simple and authoritative solution of "the difficulty," not "of my position,"—I had none—but of the parents'. I think from this *apologia* it will clearly appear that I have not "erected any view of mine as to vaccination into a rule for the discharge of my public duties." As a "public officer appointed to discharge a great public duty," my constant object is to procure, by any and every fair means, the widest possible application of the Act that I have to execute. This is not to be gained, I believe, by drawing the red tape with needless and irritating tightness, but by showing every consideration for the reasonable wishes of my fellow subjects, when it is not their object to resist or evade the law, and by taking out of the hands of the opponents to a most beneficent institution, the one weapon that seems to me to have real edge or point.

There is about your criticism a fine official flavour, that almost suggests that in it I have the reply that was denied to my last communication addressed to the Department, with a scarcely veiled hint that I run the risk of finding myself one of these days "relieved" of all my "difficulties" and "responsibilities" as public vaccinator. This much is certain, that no occupation of any public office will ever cause me to divest myself of or forget my personal rights and duties as a man, a citizen, a parent, and a member of our profession, and that I will always endeavour to treat with the same human "sympathy" and consideration my public as my private patients, in entire disregard of supercilious dictation, or anonymous and irresponsible censure, based on general misrepresentation and misconstruction. Meantime, I remain, Sirs, your obedient servant,

THOS. M. WATT,
Public Vaccinator.

May 19th, 1890.

*** If we have misunderstood Mr. Watt we express our regret, but we adhere to the opinion that the choice of lymph is the business of the operator, not of the parent, for the reason that the vaccinator is responsible for the proper performance of the operation. It may interest Mr. Watt to know that the writer of the comments on his letter has never held any official position whatever.—ED. L.

PYLORECTOMY AND GASTRO-ENTEROSTOMY.

To the Editors of THE LANCET.

SIRS,—I am glad to find that another case of gastro-enterostomy for pyloric carcinoma had been performed successfully by Mr. Mayo Robson, and I would urge the importance of all cases, whether successful or not, being reported, so that we may be able to judge as to the usefulness of the operation—(1) in relieving suffering, (2) in prolonging life. I shall be glad, therefore, if all surgeons who have performed the operation of pylorectomy or gastro-enterostomy will be good enough to report the same through your columns, or send a brief account of their cases to me. I would again draw attention to the importance of adopting either kangaroo tendon or chromicised catgut for the sutures passing through the coats of the stomach and intestines instead of Chinese silk. In the case reported by Mr. Paul in your issue of May 17th, which died on the eighth day, he reports at the post-mortem examination, "the bone-plates had entirely disappeared and the silk ligatures were hanging loose in the opening." The same state of things was found in the case of mine which died on the sixth day; this specimen I showed at the Medical Society. In another case, which died four months after the operation, the silk ligatures were still present. These ligatures, therefore, must be a fruitful source of irritation, and, situated as they are at the artificial pylorus, may be the means of arresting the passage of food into the intestine, and if the patient lives sufficiently long may become the nucleus of a gastrolith. In all my experience I used chromicised catgut, and found in every case it lasted a sufficiently long time to allow of firm union taking place between the two portions of intestine to be united. After death no trace of it was to be found. I have adopted this form of suture in my last cases of gastro-enterostomy with most satisfactory results.

I am, Sirs, yours faithfully,

Upper Wimpole-street, May 19th, 1890. FRED. B. JESSETT.

THE MORTALITY OF VAGINAL HYSTERECTOMY.

To the Editors of THE LANCET.

SIRS,—In the account published in this week's issue of THE LANCET of the discussion on vaginal hysterectomy at the last meeting of the Obstetrical Society, Dr. Cullingworth is reported to have said: "Dr. Lewers, in comparing the mortality of the two operations (the supra-vaginal amputation of the cervix and vaginal hysterectomy) had quoted figures that were altogether incorrect. The mortality from supra-vaginal amputation was over

7 per cent., while that from total extirpation was but 5 per cent." What I did say was that I had myself performed the supra-vaginal amputation of the cervix seventeen times without a death, and the total extirpation three times with one death. I do not for a moment imagine that Dr. Cullingworth, in the passage I have quoted, intends to dispute the correctness of these figures, but I rather understand him to take exception to my contention that total extirpation of the uterus for cancer is a far more serious operation than the supra-vaginal amputation of the cervix.

If we consider German statistics alone, it is correct to say that the mortality of supra-vaginal amputation of the cervix in Germany *about five years ago* was "over 7 per cent.," and the mortality of total extirpation there at that time nearly 30 per cent. Recent German statistics show a mortality in total extirpation for cancer of 5 per cent., but it is evidently a serious error to take it for granted that the mortality of supra-vaginal amputation of the cervix has remained stationary up to the present at what it was five years ago—viz., over 7 per cent.; and comparing this with the 5 per cent. mortality recently reported for total extirpation, to conclude that supra-vaginal amputation of the cervix is the more dangerous operation. Further, whatever the explanation of the low rate of mortality in Germany for total extirpation may be, it appears a sound principle that English rules of practice should be founded on, or confirmed by, English statistics; and until some operator here can report twenty consecutive total extirpations of the uterus for cancer, with only one death, it would be a misfortune to accept 5 per cent. as the risk run by a patient subjected to total extirpation in this country.

I am, Sirs, yours truly,

ARTHUR H. N. LEWERS.

Wimpole-street, W., May 17th, 1890.

URINE TESTING IN PREGNANCY.

To the Editors of THE LANCET.

SIRS,—In the Obstetrical Society's Transactions for 1887 (vol. xxix.) there are two very interesting papers by Dr. Herman, one on "The Eclampsia of Pregnancy," the other on "A Case of Bright's Disease during Pregnancy." In his first paper, on "The Eclampsia of Pregnancy," on page 527 the following statement is made with regard to the chemical methods employed for the detection of paraglobulin and its separation from serum albumen (I quote Dr. Herman's own words): "In accordance with the instructions of my colleague, Dr. Ralfe, ... the urine was tested by *heating* it with a saturated solution of magnesium sulphate, in order to precipitate the paraglobulin, filtering it, and then testing the precipitate for serum albumen by heat and nitric acid." Now, serum albumen, according to the recognised authorities, coagulates at a temperature of 65° C., paraglobulin between 68° and 80° C.; consequently, if the urine were heated above 80° C., both albumens would be precipitated, no matter whether magnesium sulphate were present or not. And as a result, such a method of separating paraglobulin from serum albumen would be valueless. As a matter of fact, the whole test turns upon the use of the word "heat." If by "heat" is meant warmth applied up to 64° C., then the test holds good, and the report is merely inaccurate; but if by "heat" is meant a temperature above that point, then the test is not only inaccurate but misleading, and the conclusions of the paper, as far as the nature of the albumens present is concerned, vitiated. The ordinary method for the separation of paraglobulin from serum albumen is to saturate the urine in the *cold* with magnesium sulphate, leaving it to stand for forty-eight hours and occasionally shaking it to get free circulation of the salt. Paraglobulin is then thrown down, but even so it comes down tardily and with difficulty. The only other clinical tests for the substance are the so-called globulin reaction with water, which can often be obtained in normal urine, and the method of taking the temperature of coagulation, a test which is really more fitted for the laboratory than the bedside.

In a case of eclampsia recently under the care of Drs. Champneys and Whipham at St. George's Hospital the urine tested before delivery showed a marked decrease of urea; paraglobulin was present in very small quantity, serum albumen to the extent of 75 per cent. A most marked peptone (biuret) reaction was obtained from the urine, which was due, not to the presence of real peptone, but to an albuminose. In the urine tested forty-eight hours after delivery the amount of urea was found to be greatly increased, all trace of paraglobulin and albuminose had disappeared; and the serum albumen present was decreased to about 12 per cent. It is with the greatest deference that I venture to find fault with the methods of such an authority as Dr. Ralfe, but the importance of the conclusions drawn in Dr. Herman's paper as to the nature of the albumen present in eclampsia and true renal disease must be my excuse. The forms of albumen passed in the urine in the different kinds of kidney disease constitute a subject fraught with great difficulty, but it is one which may possibly some day yield brilliant results, and any literature on the subject is very welcome. It is, therefore, all the more important that the foundation stones of the structure should be "well and truly laid," and it is on this score that I have thought it right to criticise a paper written so long ago as 1887.

Believe me, Sirs, your obedient servant,

W. K. FYFFE,

St. George's Hospital, April 21st, 1890. Assistant House Physician.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle Hospital Sunday Fund.

THE Management Committee of the Newcastle Hospital Sunday Fund held a meeting for the distribution of the fund last week. The treasurer said that the amount collected for the past year had been £4753 9*s.* 7*d.*, leaving, after deducting expenses and carrying forward £171 9*s.* 7*d.*, a balance of £4453 9*s.* 7*d.* to be dealt with, besides home purchased letters amounting to £2219. The awards are: Deaf and Dumb Institution, £63; infirmary grant to be on the same principle as last year (£400 for every clear £1000 of subscriptions), giving £100; and a free gift of £1600 to the other medical charities on the list. Reference was also made and thanks given to the Dramatic, Press, and Sports Committee for their handsome contribution of £158 12*s.* 0*d.* to the fund. It was mentioned that during the last twenty years, the period of existence of the Hospital Sunday Fund at Newcastle, it had been the means of adding more than £60,000 to its charities, and the record is creditable to the liberality of its citizens.

Chronic Lead Poisoning of Workwomen.

Some more of those sad cases have occurred on the Tyne lately in which white-lead workers lose their lives from following their dangerous occupation. In the last case in which an inquest was held, the woman had been suspended from one of the factories owing to a suspicion that she was under the influence of the lead, but she concealed this, and succeeded in obtaining employment at another lead works, where she became so ill that she had to be removed to the workhouse, where she died. The coroner said it was not fair that the owners of lead works should incur the odium of so many deaths arising in lead workers in this way, as in all the well-regulated works every care was taken against contamination, and on the least illness showing itself the workers were suspended by the medical officers; but the workers often, unfortunately, through misrepresentation, obtained work in other factories. Still, he said, the sooner that manual labour in white lead was done away with, the better it would be for the poor creatures who earned such a livelihood by means of what meant almost certain death. Some escaped longer than others, but if the workers would not avail themselves of the preventive appliances and medical treatment which were provided, the result was that their end came all the sooner.

The Newcastle Colleges of Medicine.

Dr. Embleton has published for the benefit of the Durham College Building Fund an interesting "History of the Medical School, afterwards the Durham College of Medicine, at Newcastle-on-Tyne, for Forty Years from 1832 to 1872." Dr. Embleton, in his prefatory sketch, gives a full account of the numerous medical charities and institutions of Newcastle. His account of the old lecturers and students is most interesting, and will repay perusal, as well as serving as a record of many who have passed away, including Sir John Fife, Drs. Headlam, Charlton, Greenhow, R. M.

Glover, Humble, George Robinson, and Snow. In the list of earlier students will be found many well-known and prominent names in private and military practice, such as Surgeon-Major Hutton, Drs. Marston, Samuel Fenwick, Heath, Gibb, and William Murray. Dr. Embleton has in his little work of 126 pages compressed a large amount of information as to Newcastle medical men and its schools, for it rejoiced in two for several years, and there is ample evidence given that they both did good work. Dr. Embleton has not been unmindful of the Johnsonian opinion that "it is the great excellence of a writer to put into his book as much as his book will hold."

Carlisle Hospital Sunday.

The annual collections in aid of the five principal medical charities of Cumberland and Westmoreland were taken on the 11th inst. A new arrangement having been come to whereby the Hospital Sunday Committee will distribute all the money sent to the treasurer among the institutions on the basis of its expenditure, the matter is looked upon as somewhat of an experiment; and it would appear so far to be hardly a successful one, as the collections are not quite equal to last year's—that from the Cathedral, for instance, showing a decided falling off. At Workington there was an imposing demonstration of the Volunteers, Friendly Societies, and public bodies, while the places of worship were crowded, and the turnout of people to witness the procession is said to have been immense. The same applies to the other towns—Keswick, Cockermouth, &c.; so that it is to be hoped that the aggregate amount when made up will prove substantial.

Grange-over-Sands.

The North-Eastern Counties Convalescent Home at Grange-over-Sands, to the establishment and aims of which I have frequently referred in these notes, was formally opened on Friday last by the Rev. Canon Body and a representative assembly from Newcastle, Sunderland, Durham, &c. The leading features of the home are that it is for the members of the Friendly Societies in the north-eastern counties, and is to be supported and managed by them. The Home has been founded by Mrs. Williams of Grange. Plans for a larger establishment are now under consideration; they provide for the erection at first of six cottages on a site given by Mrs. Williams, who has also offered to build them, and charge interest on the cost as rental, thus removing the necessity for a building fund. The cottages can be converted into house property should they not be successful as a home. Dr. Anderson of Grange has been appointed visiting medical officer.

Newcastle-on-Tyne, May 21st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

Communications to the Universities' Commission.

THE evidence before this Commission is unfortunately taken in private; but seeing certain things become public, it might be asked why others are not forthcoming. Did the Colleges of Physicians and Surgeons and the Extra-mural Lecturers not send in memoranda to the Commission? Might these bodies not have taken the profession into their confidence or have allowed their reports to find their way into the medical press at least? The profession might be interested in them.

International Medical Congress.

A Scottish committee has been formed, at the request of the Organising Committee in Berlin, to facilitate arrangements as regards Scottish members of the Congress. Gentlemen who propose attending the Congress are requested to send their names to Dr. G. A. Gibson, 17, Alva-street, Edinburgh, who is acting as secretary to the Scottish Committee.

The University Civil Law Class.

Professor Gondy, who has succeeded the late Professor Muirhead in the Civil Law chair, delivered his inaugural lecture last week. The medical faculty was represented on the occasion by Sir Douglas Maclagan and Professor Greenfield. Professor Gondy took for his theme "The Study of the Roman Law." He considered the subject under three divisions: (1) Should the Roman law be a subject of study in our Universities at the present day? (2) if it should, what is the best mode of teaching it? and (3) what provision is made for its study in the Scottish Universities? Under the first head he showed that the law of no European State could be known without a knowledge of the Roman law, and hence the necessity of studying it. While there was practically no provision in the Scottish Universities for the teaching of Roman law, it was his duty to teach from the chair of Civil Law the law of Rome, both historically and doctrinally, as this was the only true means of understanding the basis upon which systems of law rested.

The Medical Staff Corps.

To-morrow sixty members of this corps, along with their ambulance waggons, litters, &c., leave town for camp at Kinross until Monday. They are to be under the command of Dr. Hepburn, and are to encamp in Sir Graham Montgomery's ground. On Saturday the local Volunteers are to have a sham fight, and the medical corps is to be on the field and do ambulance work.

The Extension of the Longmore Hospital for Incurables.

I intimated a fortnight ago that the authorities of this hospital had made an appeal for funds to enable them to increase their accommodation. It is gratifying to note that a legacy of £3000 has been left to it, and that the Longmore trustees have promised £5000 if the remaining £7000 be subscribed by the public. £15,000 is the sum required.

The Societies.

At the last meeting of the Scottish Microscopical Society Dr. Barrett made a communication on Some Points connected with the Structure of the Tongue of the Canary. On Monday, at the Royal Society, Dr. A. Bruce discoursed on the Roots of the Auditory Nerve and its Anatomical Connexions.

The Registrar's Returns.

During the quarter ending March 31st last there were registered in Scotland 30,124 births and 23,316 deaths, the former being below and the latter above the corresponding quarter of the last ten years. The births were at the annual rate of 296 per 10,000 of estimated population, and the deaths at the annual rate of 229 per 10,000, the latter being exactly the same as the rate for the same period in England and Wales. The death-rates in the towns per 10,000 of population were: Glasgow, 283; Dundee, 279; Aberdeen, 259; Edinburgh, 252; Paisley, 250; Leith, 244; Perth, 229; Greenock, 202. Of the total deaths, 11,599 were males and 11,717 females.

Dr. Hamilton Ramsay has again been appointed Purse-bearer to his Grace the Lord High Commissioner at the General Assembly.

The mortality of the city of Edinburgh last week was at the rate of 15 per 1000. The intimations of infectious cases include 68 cases of measles.

Edinburgh, May 20th.

GLASGOW.

Western Infirmary: Presentation of a Convalescent Home.

The Western Infirmary has just had a most valuable addition made to its resources in the form of a convalescent home, the gift of Colonel Hozier of Mauldslie Castle. The building stands in grounds extending to an acre and a half, and is situated in Lanark, one of the most beautiful and healthful districts in the valley of the Clyde; it was formerly fitted up and used, at a cost of about £5000, as militia stores, but now it has passed into the hands of the managers of the Western Infirmary, "to be used by them in the interests of the public for convalescent purposes." This gift is probably one of the results of a strong appeal for accommodation of this kind made in their last annual report of the managers of the Western Infirmary, in which it was pointed out that the possession of such a home would be true economy from a financial point of view, and would enable the staff, with their present space, to overtake a much larger amount of actually curative work. About two years ago there were given in THE LANCET figures, obtained from a great many sources, which showed that the average period of residence of patients in the Glasgow infirmaries is very much longer than, in some cases nearly double, that in hospitals elsewhere, and this was distinctly traced to the want of sufficient accommodation for conva-

lescents. It is easy to see how this would tend to lessen the number of cases it is possible to treat in-doors in any given time. The gain financially will be equally striking, as it is well known that patients, on an average, are kept in convalescent homes at a cost of little over half that necessary in an infirmary. The average period of residence in the Royal and Western Infirmaries is thirty-six days, and the average total cost is £5, or 2*s.* 9*d.* per day; at a home the cost is little over half, say 1*s.* 6*d.* per day; twenty days in an infirmary and sixteen days in a home would thus cost £3 19*s.*, a saving of one guinea on each case fully treated.

St. Mungo's College.

This College is stirring itself actively in affording facilities for study qualifying for medical officerships of health under the County Councils. Two new lectureships have been instituted, one on Hygiene, to which Professor Glaister has been appointed, and another on Public Health, to be undertaken by Dr. J. C. McVail of Kilmarnock, the well-known champion of vaccination.

Anderson's College.

Since removing to the new quarters in Dumbarton-road this College has continued prosperous. The last winter session was a very successful one, the number of students having been 145, representing an increase of fifty. The encouraging results of the summer session are such as to show conclusively that in removing to the new abode the interests of the old Andersonian have been fostered.

Glasgow, May 19th.

DUBLIN.

(FROM OUR OWN CORRESPONDENT.)

Royal College of Surgeons.

THE candidates at present before the electors for seats on the Council are: Mr. William Frazer, ex-examiner and member of Council; Dr. Heuston, professor of anatomy, Royal College of Surgeons, who last year was elected to the Council; Dr. C. B. Ball, Surgeon to Sir P. Dun's Hospital; and Mr. Thomas Myles, surgeon to Jervis-street Hospital. Dr. Thompson of Omagh and Mr. Kelly of Drogheda are also mentioned, but in a few days additional names may be expected. Analysing the returns of the annual elections for the past few years, it may generally be stated that unless a candidate can obtain 120 votes, he will probably fail to obtain a seat.—Surgeon Parke, A.M.S., of the Stanley Expedition, is expected to arrive in Dublin on the 31st inst., when he will be presented with the Honorary Fellowship of the College, and will dine the same evening at the College.—The prizes obtained by the students of the schools of surgery at the termination of the winter session 1889-90 will be conferred by the president (Mr. Austin Meldon) on the 27th inst.

University of Dublin.

At the Medical Scholarship examination commencing on June 30th, in the subjects of Anatomy and Institutes of Medicine, a Stewart Scholarship of the value of £10 a year, tenable for three years, will be awarded to the second best candidate, provided he reaches the required standard.—The four candidates for the representation of the University in Parliament are Mr. Carson, Q.C., Colonel Lowry, Surgeon Wheeler, and Mr. Sheckleton, Q.C. The fifth candidate has resigned in favour of the Crown nominee, Mr. Carson.

The late President of the Queen's College, Cork.

At a meeting of the Council of the Queen's College, Cork, held last Saturday, the following resolution was adopted:—"That the Council desire to express their deep sorrow at the death of William Kirby Sullivan, the President of the College, and to convey to his family their sympathy with them in their present bereavement. The Council hereby place on record their sense of the devotion to the College displayed by the late President during the period of seventeen years in which he presided over it, and the energy and wisdom which he brought to bear in developing its resources and increasing the advantages which it would offer to its students. They feel quite unable to express adequately their conviction of the loss sustained by themselves and the entire College through the removal from amongst them of one of whom the strength of his character and his generous sympathies exercised so beneficial an influence." A preliminary meeting will be held this week for the purpose of taking steps to perpetuate the memory of the deceased president.

Presentation to Mr. Stafford.

Mr. Stafford has been presented with two testimonials—one from the general community, and the second from his professional brethren—congratulating him on his recent promotion to the post of Medical Inspector for Ulster Local Government Board.

Cork Lunatic Asylum and the Cork Town Council.

The Corporation have refused to pay for the support of the city patients in the asylum for a very considerable period, and they now owe a sum of £4103 17*s.* 3*d.* Their refusal to contribute is on the alleged ground that they do not possess sufficient representation on the Asylum Board. But it has been shown that there are six members of the Corporation on the Board, as contrasted with four members of the Grand Jury, and as the proportion of representation according to taxation of these two bodies is as two to five, the Cork Corporation should only have three instead of six members on the board. If the asylum governors applied for a *mandamus* the money would have to be paid at once, and the refusal to pay by the Corporation is thoroughly illogical, untenable, and unjust to the pauper inmates from the city.

Pharmacy Act (Ireland), 1875, Amendment Bill, 1890.

This is a Bill to amend the Pharmacy Act, 1875, and if passed will apply to Ireland only. Section 15 of the principal Act, and all other provisions of that Act, empowering the Pharmaceutical Society of Ireland to create a grade of chemists and druggists legally qualified to dispense medical prescriptions, are repealed. The registrar is to maintain a complete list, to be called "The Register of Chemists and Druggists in Ireland," of all persons authorised to be registered as chemists and druggists, and those registered will be entitled to keep open shop for the sale, retailing, or compounding of poisons. But nothing in the Act will confer on such persons any right to compound medical prescriptions. The Act details the conditions under which persons who were in business before January 1st, 1889, and after that date shall be admitted to the register, and the fees to be paid for registration and examination. Any person who assumes the title of registered druggist or chemist, or sells poisons, unless registered, will be liable to a penalty of £5 for each offence.

Dublin, May 20th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Remarks on Digitalis.

IN a paper on this subject Dr. Huchard remarks that opinions are extremely varied as to what preparations of this drug should be prescribed, and the manner in which it should be administered. Gubler gave the preference to the tincture of digitalis, but the majority present prescribed the cold infusion of digitalis, on account of its supposed greater diuretic activity. It is prepared by taking from 25 to 40 centigrammes of the powdered leaves of digitalis and adding 300 grammes of cold water. This should be allowed to macerate for twelve hours, and should then be filtered. It may be sweetened with sugar or syrup. When it is desired to obtain a powerful diuretic action, it is preferable to administer this quantity in two or three doses. It is always useful to prescribe it, according to the advice of Dr. Richard Pfaff, in gradually decreasing doses, then to stop the drug after four or five days. Some practitioners prefer giving the digitalis in small doses of ten centigrammes, to be continued for about ten days. Drs. Jaccoud and Fernet recommend the infusion, while others prefer powders or pills. In concluding his note, Dr. Huchard suggested that there should be no hesitation in giving the preference to the first-named, and in prescribing it in large doses.

The Advance of Surgery.

A recent meeting of the Academy of Medicine was almost entirely taken up with reports of different surgeons demonstrating the progress that has been made in surgery during the last few years. By the use of antiseptics and anæsthetics operations are now performed which twenty

years ago no surgeon would have attempted. Dr. Périer showed a patient on whom he had performed gastrotomy to extract from the stomach a tea-spoon that he had swallowed; and also a young girl of ten years of age, on whom he had performed œsophagotomy for the removal of a large sleeve button. Both the patients got rapidly well. Dr. Polaillon exhibited a fœtus of two and a half months, which he extracted from the abdominal cavity, by laparotomy, from a young woman twenty-six years of age, in whom, in the course of extra-uterine pregnancy, rupture of the Fallopian tube took place. The Fallopian tube and the right ovary were removed in the same operation. Dr. Le Dentu also performed a laparotomy on a young woman aged twenty-three, from whom he removed a cysto-fibroma of the tubo-ovarian ligament, which was covered over by a vegetating growth composed of squamous epithelium. In a case of laparotomy practised for intestinal occlusion, Dr. Jules Beckel of Strasburg performed the operation indicated by Madelung and now practised in France by Dr. Bérier. He made an incision of six centimetres into the intestine, from which escaped gas and liquid matters in abundance. He then closed the wound with eight silk carbolised threads, which allowed him to reduce the intestine very easily. No unfavourable symptom supervened after the operation, and in forty-eight hours afterwards the patient had a normal motion from the bowels. On the seventh day union was perfect, and fifteen days later the patient was able to leave the hospital quite cured.

The Society of Mental Medicine are taking measures to obtain the erection in Paris of a special hospital and *clinique*, in order to provide means of studying mental diseases.

Paris, May 20th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Virchow.

PROFESSOR VIRCHOW lately paid a visit to his friend Schliemann at Hissarlik, to see his new excavations there, and took advantage of the opportunity to visit Constantinople. He was invited by a deputation of the Medical Society there to attend one of its meetings, and complied with the invitation. The President, Dr. Stekulis, delivered a speech in which he celebrated Virchow's services to science, which had crowned the edifice of the modern anatomical pathology founded by Morgagni. Virchow thanked the speaker, described the impressions which the developing intellectual life of the East had made upon him, gave an account of the present state of biology, and, in compliance with a request, described the newest methods of treating leprous diseases. The meeting afterwards assumed a more social character.

Death of Friedrich Küchenmeister.

Friedrich Küchenmeister died at Dresden on the 13th ult., aged seventy. In 1852 he proved by experiments that the tapeworm develops out of the cysticercus cellulosus, and that the latter is traceable to the tapeworm's brood. He was one of the first advocates of the official inspection of cattle, meat, and meat markets. He investigated the propagation and treatment of cholera and the local frequency of consumption in Saxony, and wrote on these subjects. For some time he edited a periodical of his own, entitled *Periodical of Epidemiology*. He was one of the most zealous advocates of cremation. Two writings of his later years on Luther's last illness, and on the date of Luther's world-famed hymn, "Ein fester Burg ist unser Gott," bear interesting testimony to the width of his sympathies. He was a native of Buchheim in Saxony, studied in Leipsic and Prague, practised at Zittau, and subsequently went in 1850 to Dresden, where he spent the rest of his life. His remains were burned at Gotha.

Surgeon-General Valentini, who has now retired from the Sanitary Corps, has been a surgeon in the Prussian army for nearly half a century. He studied in the Berlin Pepiniere, the famous school from which Prussia gets her army surgeons, and began his career in the Charité. He is a native of Berlin. His father was an Italian teacher of high reputation here, and author of a German-Italian lexicon.

Professor Grashey of Munich has not yet entered on his duties as Westphal's successor, and the duties of the office are still entrusted to Westphal's last assistants, Drs. Oppenheim and Liemerling.

The eighth general meeting of the Society of Prussian Medical Officers will be held here on Aug. 1st and 2nd. The subjects of discussion will be:—How shall medical officers serve the State and society? the question of placing the victims of alcohol under trustees; stupor or acute curable dementia; and the procuring of statistics necessary for medical officers of districts.

The number of the medical institutions attached to Berlin University was increased to-day by the opening of a town clinic for orthopædic surgery, under the direction of Professor Julius Wolff, the discoverer of the law of the transformation of bones in pathological alterations of their external form.

The Berlin Society for Diseases of the Mind and of the Nerves has elected Medical Councillor Dr. Lander, head physician of the great asylum at Dalldorf near Berlin, its president, in place of the late Professor Westphal.

Berlin, May 20th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Ninth German Congress for Internal Medicine.

DR. HUERTHLE of Breslau has made experiments on the closure of the semilunar valves; he used for this purpose a special differential manometer, by which he could demonstrate that the semilunar valves are opened a short time (from 0·02 to 0·05 second) after the beginning of the systole. From this moment up to the end of the systole (0·20 second) the ventricular pressure continues to be higher than the aortic pressure. From this the lecturer concluded that there does not exist the supposed time of continued contraction, but that the expulsion of the blood into the aorta, which goes on until the end of the systole, renders it impossible that the semilunar valves can become closed previously to the commencement of the diastole.—Dr. Schott of Nauheim spoke of the acute overstraining of the heart, the existence of which had been recently denied by some writers. Dr. Schott succeeded in artificially producing in healthy persons the whole of the complex symptoms characteristic of the disorder by wrestling continued up to the point of dyspnœa, and by the compression of the body of the wrestlers. These were principally dilatation of the ventricles and auricles. Similar phenomena were due to muscular overwork caused by lifting heavy loads, mountain climbing, bicycling, dancing with tight corsets, and disappeared only in healthy persons, becoming in the weak a serious danger. Absolute repose, good feeding, the use of tonic remedies, and sometimes the cautious application of baths and gymnastics, were recommended for the treatment.—A lecture on Strophantin, by Dr. Rothziegel of Vienna, pointed to the useful properties of this new remedy.—Dr. Krehl of Leipsic reported on the results of the examination of the heart muscle in cases of valvular disease. Only seven cases (five of mitral and two of aortic disease) had been examined; endocarditis and endarteritis of the small muscular branches, combined with extensive muscular atrophy, were present in all. The anatomical changes corresponded to progressive inflammatory processes scattered throughout the muscular substance of the heart. Therefore it would be necessary before giving a judgment on the prognosis of a case of valvular disease to take into consideration the state of the heart muscle.—An interesting specimen of the presence of a walnut-sized, ball-shaped thrombus in the left auricle of the heart was demonstrated by Professor Ziemssen of Munich. The diagnosis could be made by the fact that the patient was suffering from mitral stenosis, and that the flow of the blood in the left heart was impeded and caused coldness of the extremities—"tachy- and bradycardia." In some cases gangrene of the lower extremities had been caused.—Diseases of the lungs were represented by a lecture given by Dr. Schmidt of Reichenhall on the Hot-air Treatment of Tuberculosis, wherein the complete inefficiency of the Weigert system was dealt with.

Vienna, May 17th.

MEDICAL MAGISTRATE.—Adam Fletcher, M.D.Edin., M.R.C.S., has been placed on the Commission of the Peace for the County of Lancashire.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Execution by Electricity.

PUBLIC EXCITEMENT in anticipation of the execution of the murderer Kemmler had reached fever heat when the announcement was made that there was another stay of the execution. During the past year the case has been considered in every possible aspect. First, the courts discussed every legal phase, and finally, on appeal, the highest court decided that execution by electricity was constitutional. Then electricians representing different companies discussed the various questions relating to the methods to be pursued in execution by electricity, the ultimate object of each company being to secure the contract of setting up its machinery in the several State prisons. The contention became very bitter, and when the contract was finally awarded the competing company which failed began to resort to measures of prevention of the execution. Meantime the successful company erected its apparatus at great expense, and after many trials success seemed assured. Everything was in readiness for the execution, when the defeated company appealed to the United States courts, and the criminal was at once taken from the jurisdiction of the State and the execution was indefinitely postponed. Another move was also made by this company, the issue of which is pending—viz., the abolition of capital punishment. A Bill is now before the Legislature of this State to accomplish that object, and it has already passed the lower House. So execution by electricity is likely to remain for some time a theoretical rather than a practical subject.

The International Medical Congress.

The attendance of American physicians at the Berlin Congress will be very large. We hear the note of preparation in all medical circles, and as it is annually becoming more and more the custom to spend the summer months abroad, the profession will seize upon this occasion of low fares and an International Congress to make an ocean trip in unusual numbers.

Removal of the Insane from County Houses.

A Bill has just passed the Legislature of the State of New York making it unlawful to transfer any insane person from a State Asylum to a county house. It also provides for the erection of inexpensive buildings, to which are to be removed all of the insane now in county houses. The policy of this State was long since declared to be in favour of State care of the insane, but adequate provision was never made to carry out this policy until now. The reform in the care of the insane which this law will secure will prove of incalculable advantage to this class of dependants.

Medical Education in the United States.

The sixth report of the Illinois State Board of Health, on Medical Education in the United States and Canada, has just appeared, prepared by its secretary, Dr. John H. Rauch. To Dr. Rauch more than to any other man we owe what progress we are making towards a higher education in our medical colleges. The publication and wide circulation of these successive reports, and the provision in law in Illinois which prevents any educationally unqualified person from practising in that State, exercise an influence and even a power over the schools of the most salutary character. The increase in medical schools during the year is 8; the number of graduates in 1889 was 4337; 27 colleges will require four years' study, against 4 in 1889; there are 7 medical colleges for women, and 2 for coloured students. There is a large increase of colleges requiring a preliminary examination of students as to educational qualifications; they now number 124. In 119 colleges chairs of hygiene have been established, and in 114 there are chairs of medical jurisprudence. The total number of medical matriculants last year was 13,714. The percentage of graduates to matriculants was 31·6. The work of the Illinois State Board is more and more aided by other State boards which have adopted similar rules relating to practice. These State boards control the recognition of diplomas in an area embracing 18,000,000 people. There are also several State boards of examiners which recognise no diploma. It appears, therefore, that there is a more or less active supervision of medical education covering a territory inhabited by nearly one-half of the population of the United States.

New York, May 5th.

Obituary.

ARTHUR JULIUS POLLOCK, M.D. ST. AND., F.R.C.P. LOND.

THE death of Dr. Julius Pollock on Sunday, May 11th, was an altogether unexpected event. It was not generally known that he had for some time suffered from albuminuria, for, although he was in the habit of periodically estimating its extent, he never seemed at all anxious concerning the possibilities the condition presented. Keenly sensitive to cold weather, and carefully guarding himself against its dangers, his condition gave but little anxiety to his friends. Early in the year he had a sharp attack of influenza, but from this he believed himself to have completely recovered. At Easter he was busily occupied by the epidemic of measles at the Foundling Hospital, in addition to all his ordinary work. On Monday, May 5th, Dr. Pollock visited his wards as usual, but in the evening had a rigor, and on the following day complained of pain in the left side. He then consulted one of his colleagues, but did not seem to appreciate the extent or degree of his illness. On the 7th he wrote letters arranging with his colleagues to carry on his work until the end of the week, thinking it "wiser to stop in-doors for a few days." But by this time the effusion into the left pleural cavity was considerable, and the albuminuria increasing rapidly. Even the few days' illness had caused marked wasting, and when pericarditis supervened his strength rapidly gave way, and he died on the morning of Sunday, May 11th, from cardiac failure, in his fifty-sixth year.

Dr. Pollock, as is well known, was a son of the late the Right Hon. Sir Frederick Pollock, Bart., Chief Baron of the Court of Exchequer. He received his medical education at King's College, and in 1861 graduated at St. Andrews. In 1866 he was elected assistant physician to Charing-cross Hospital. Vacancies in the staff occurred in quick succession, and with an almost unique rapidity he became senior physician to the hospital eight years after he first joined the staff. During the earlier years of his connexion with Charing-cross, he lectured on Pathology, and subsequently on Forensic Medicine, but for the last sixteen was Lecturer on Medicine. In 1869, when he had been on the staff but three years, he was appointed Dean of the School. This post he held for five years. He then became Treasurer, and may almost be said to have created this office, for in his person it has come to be considered one of the most honourable and most responsible of the offices held by members of the medical staff. Dr. Pollock was a clear and incisive, but not a voluminous writer. His "Notes on Rheumatism" are well known. Nearly all his other contributions to medical literature were published as lectures or as "cases" in the pages of THE LANCET. The shadow his death has cast is much too deep for any just estimation of his influence to be at present possible. His greatest services to Charing-cross Hospital were rendered in his administrative capacity. On the staff he supplied the judicial element. Himself ever leaning to the *status quo*, he yet recognised with an almost unerring instinct the lines along which advance was necessary, and sought to control rather than to check. These characteristics, added to a warmth of manner and a degree of courtesy rarely surpassed, made him a favourite with all his junior colleagues. He was never too busy, never too little interested, to attend either to the suggestions or the grievances of anyone, provided only that it was the affairs of the school or of the hospital that formed the subject matter. No better representative of the staff could ever be found, and if delicate negotiations had to be conducted the vote which entrusted them to his care was invariably unanimous. Dr. Pollock's oratorical power was of no mean order. Many instances of this might be given. Some years ago the secession of a large body of sisters and nurses from St. John's House divided the council of the hospital into two, for the time, opposing sections. At the final and decisive meeting those present will remember that no speech was more effective or in better taste than that of Dr. Pollock, who on this occasion represented the views of the medical staff. On another occasion of a wholly different character a still more striking effect was produced. Practices had arisen among the students which were considered detrimental to proper order and discipline. The School Committee ex-

perienced some difficulty in dealing adequately with the matter, and after some hesitation it was decided that the staff should request the attendance of the entire body of students. Dr. Pollock was selected to address them. Disturbances were anticipated, but none occurred. His genius, for such on that occasion he showed it to be, asserted itself. His speech, almost unprepared, was as effective as Mark Antony's oration. By a skilful combination of tact and reasoning he carried conviction to the minds of all the occupants of the crowded theatre; hardly a single dissentient murmur was heard; and when he sat down, he received an ovation which proved the complete success of his effort. To many it was a matter for considerable surprise that, with so many natural advantages, Dr. Pollock did not rank among the most successful clinical teachers of his time. But even here his natural tact did not desert him, for whenever teaching arrangements were being planned he never hesitated to express, and to act upon, the modest estimate he had himself formed of his power in that direction. He was a frequent visitor to the post-mortem room, and so important did he consider this branch of medical study that some years before his death he wrote out instructions concerning the procedure he wished adopted in his own case, and thus illustrated by his example what he had always insisted on in his teaching. But, in the governors' pew and in the infirmary at the Foundling Hospital, he will also be much missed and regretted. In the former his was one of the most familiar faces. To the children he was ever welcome. They saluted him with an eager alacrity and a bright smile, which told something of the mingled feelings of reverence and affection they entertained towards him. In a very true sense he was a religious man. From a diffidence that rarely spoke, and a horror of all that was narrow or exclusive, an opposite and erroneous impression seems sometimes to have been produced. The last book he ever read was a volume of "Sermons preached at the Foundling Chapel," and those who on the Sunday following his death listened to the appropriate words of the anthem he would himself have so much appreciated, "The souls of the righteous are in the hands of God," longed once more

> "for the touch of a vanish'd hand
> And the sound of a voice that is still."

WALTER PEARCE, M.D., M.R.C.P., B.Sc., C.M.

IT is with great regret that we have to record the terribly sudden death of Dr. Walter Pearce, which occurred on the afternoon of May 15th, at St. Mary's Hospital, where, in a sudden attack of uncontrollable despondency, he shot himself. To give in so short a space an account of the active life of a hard-working medical man would, under any circumstances, be difficult; but that difficulty is especially increased in the present instance by the extraordinary energy and enthusiasm which prompted Dr. Pearce to undertake work, public and private, of wide-reaching character. Dr. Pearce began his career by going through the whole course in general and special science at the Royal School of Mines, and subsequently took the Bachelor of Science degree at the University of London. He then determined to adopt medicine as his profession, and threw himself with ardour into the work. He quickly passed all the preliminary examinations, and finally obtained the much-coveted M.D. Lond. With the thoroughness which characterised everything he did, he immediately took not only the diploma in Sanitary Science at the University, but also that in Mental Medicine of the Medico-Psychological Association. Probably very few men have ever pursued so conscientiously the task of educating themselves to become a physician of wide knowledge. In the course of his work he filled all the responsible positions at St. Mary's Hospital, including that of medical superintendent, and later was appointed assistant physician to the same institution. Of the manner in which he did his work in each position, of the great kindness he showed towards his patients and the interest he took in those who worked with him, it is hardly necessary to speak, as no one who knew him failed to feel it and to appreciate his self-sacrificing generosity. As a physician his one idea was how to benefit most those who came to him for help. As a colleague his utmost endeavour was to assist and to further every work and reform (not a few of which he was the first to initiate) which might be planned for the advancement of his hospital and medical school. But so far we have only touched in the briefest manner on his professional life. Dr. Pearce was, no doubt, known to us more intimately by his intense devotion to the furtherance of social schemes of national improvement. At immense cost of time, energy, and his own resources he organised temperance bands, conducting them; indeed, teaching them himself for years, and then, when obliged to live continuously in London, still lent, as far as he was able, his invaluable aid to the same cause. With characteristic energy he joined the Volunteer force, and soon enlisted his services in the ranks of the Volunteer Medical Staff Corps. Here his powers of organisation, his great popularity and enthusiasm, greatly contributed to the success of the movement, and a series of lectures which he was conducting for Volunteer medical officers were so appreciated that officers came hundreds of miles to attend them. Now all this valuable work is at an end, and it is only left to his friends to regret what might have been achieved by him had the malady from which he was suffering not received a sudden exacerbation.

From the above brief account some idea may be formed of the continual pressure of work and anxiety in which he lived, to which causes the sad fatality which we record was very greatly due. From the time when, preparing for a severe examination, he over-read himself, a despondency which recurred in periods of overwork or passing trouble was observed by those most intimate with him, and though during the few brief months of his married life this seemed to have completely left him, it appeared to return after the strain of the winter's work. A short holiday greatly improved his spirits, and it was hoped that he would entirely regain his usual frame of mind. This hope, however, proved fallacious; the despondency returned, with the melancholy result which his own family circle and friends so bitterly deplore.

CYRIL WILLIAM JECKS, M.D. LOND.

WE are grieved to have to record the death of so young and promising a physician as Dr. Cyril Jecks, the late resident medical officer of University Cottage Hospital. On Sunday, May 12th, he was seized with a very acute form of diphtheria, and on the following Thursday the disease spread to the larynx, necessitating tracheotomy. Cerebral complications occurred, and proved fatal on the fifth day from the commencement of the illness. Two days previously to the onset of the disease he was making a post-mortem examination on a somewhat similar case, and probably to this cause we may attribute his fatal illness. Dr. Jecks entered the Faculty of Medicine, University College, London, as a student in 1881, and he terminated an academical career of brilliant and uniform success by graduating M.D. Lond. in 1888. Dying so early in his professional career, Dr. Jecks had no opportunity of leaving a name in medical literature, but he deeply impressed his colleagues and teachers with his unusual capacity and enthusiasm for the science of medicine. For clinical medicine, to which he especially devoted himself, he displayed a marked talent, and his power of accurate diagnosis in difficult cases amounted almost to an instinct. Second only to his interest in clinical medicine was his zeal for pathological anatomy, to which he probably owed his untimely death. By his immediate friends he was valued, even beyond his scientific attainments, for his unaffected bearing and the thorough sincerity which characterised all his dealings with them. His invariable courtesy and uniform geniality of manner to all with whom he came in contact obtained for him a popularity which is achieved by very few. As resident medical officer Dr. Jecks was held by the hospital staff in the highest esteem, and the institution has sustained a loss which will with difficulty be replaced. It was no slight proof of this esteem that at the grave in the Finchley Cemetery on Tuesday almost every one of Dr. Jecks' teachers was present.

DR. CESARE FIORI.

ON May 8th, at Florence, died suddenly Dr. Cesare Fiori, an army surgeon of distinguished merit. His chief work was that on "Suicide among Italian Soldiers," a highly instructive treatise, where, in addition to a skilful and lucid presentation of statistics, the author's medical

knowledge is well shown in his psychiatric and anthropological "apprezzamenti" of the various types of the self-murderer. Dr. Fiori had practised the healing art in both its departments, had mixed freely in the great polemics of physicians and surgeons on controverted topics in medicine, and had always acquitted himself with effect, whether as to special knowledge, independence of thought, or fairness of spirit. But it was to the military medical career that he was chiefly drawn, partly from native bent, partly from the events of the time. As a young graduate he had in 1849 taken part in Garibaldi's defence of the Roman Republic against the French *papalini*, and his services under fire, in ambulance, and also in the city hospitals were afterwards visited by the Pontifical Government with vindictive persecution, expulsion from the Ospedale di Santa Caterina, to which he was attached, being one of its forms. In 1859 he was enrolled in the army of Central Italy, and rose steadily in the esteem of his brother officers, both medical and combatant. Again, in 1866—also against the Austrians—he gave proof of his fearless devotion to duty, insomuch that at the close of the struggle for Italian unity and the restoration of peace to the country he was marked out among the *bene meriti* for special recognition by the War Office. The last post he filled was that of Director of Military Hygiene of the Eighth Army Corps, in which capacity he initiated or promoted many reforms for the benefit of the soldier in barracks or in hospital. His funeral on the 9th inst. was one of the most impressive ever witnessed in Florence. The second regiment of the Grenadiers preceded the *cortège* with its band, and, from the War Minister to the youngest associate of the scientific bodies of Tuscany, every interest in city and province, official, military, or educational, was represented. The "Colonello Medico" Dr. Cesare Fiori was, indeed, an honour to his profession and to his country, and the telegrams of condolence that reached his widow before and after the funeral attested a feeling of loss hardly less than national.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination in Anatomy and Physiology, for the diploma of Fellow, at a meeting of the Board of Examiners on the 15th inst.:—

George A. Peters, student of Toronto Medical College; Wm. Frederick Cholmeley and Arthur Seal Blackwell, of St. Bartholomew's Hospital; Herbert William Kendall, of Middlesex Hospital; Ernest William Gurney Masterman, of Edinburgh and St. Bartholomew's Hospital; Cecil Benjamin Thomas Musgrave, of University College; Arthur Gerald Welsford, of Cambridge and London Hospital; and Joseph George Turner, of St. Thomas's Hospital. (Eight candidates were referred for six months.)

Passed on the 16th inst.:—

Edward Thomas Ernest Hamilton and Thomas David Lister, of Guy's Hospital; William Ernest Milles and Herbert James Walton, of St. Bartholomew's Hospital; and Benjamin Grant Heather, of St. Thomas's Hospital. (Eleven candidates were referred for six months.)

Passed on the 19th inst.:—

Henry Wilkes Gibson, of Middlesex Hospital; Edmund Weaver Adams and Thomas Warner, of King's College; Leonard Rogers, of St. Mary's Hospital; James Hannay Muncaster and Arthur Mantell Daldy, of Guy's Hospital; Cecil Fowler Wightman and Christopher Addison, of St. Bartholomew's Hospital; Theodore Leighton Pennell and Frank Vigers Bunch, of University College. (Ten candidates were referred for six months.)

Passed on the 20th inst.:—

William Henry Charles Staveley, of St. Thomas's Hospital; Arthur Nesham Weir, Edwin Henry, and Percy Furnival, of St. Bartholomew's Hospital; and Edmond Wallace Selby, of University College. (Eleven candidates were referred for six months.)

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The following provisional arrangements have been made for the sixtieth meeting of the British Association for the Advancement of Science, which will be held in Leeds during September next. On Monday, Sept. 1st, the reception room will be opened in the Victorian Hall to issue tickets and to give information. On the following day most of the officers of the Association will arrive. On Wednesday, Sept. 3rd, at eight o'clock, the retiring president, Professor W. H. Flower, C.B., F.R.S., Director of the Natural History Department of the British Museum, will resign the chair in favour of Sir Frederick Augustus Abel, C.B., F.R.S., chemist to the War Department, who will deliver the inaugural address.

THE JUBILEE HOSPITAL IN VICTORIA, B.C.—On Wednesday, the Duke of Connaught formally opened the hospital just completed at Victoria (British Columbia), which has been erected in commemoration of the Queen's Jubilee.

THE FRENCH HOSPITAL.—On Monday, at a dinner given by Colonel North to the French Committee of the French Exhibition, he stated that he had been informed the above hospital was encumbered with a debt of £2000. As a commencement towards its liquidation he would subscribe £500.

THE BIRMINGHAM HOSPITAL SATURDAY COLLECTIONS.—This fund was supplemented on Wednesday by £83 12*s.* 2*d.*, making the total £9479 14*s.* 6*d.* The amount raised on the corresponding day last year was £8341 4*s.* 8*d.*, so that this year's increase is represented by £1138 9*s.* 10*d.* Already last year's complete total has been exceeded by £820 15*s.* 5*d.*

EVELINA HOSPITAL FOR SICK CHILDREN.—On Tuesday last a very successful meeting of the friends and supporters of the Evelina Hospital for Sick Children was held at the Hôtel Métropole, the Lord Mayor being in the chair. In appealing for funds, he referred to the amount of good work done at this hospital, 654 in-patients and 22,024 out-patients having been treated during the past year. The founder of the hospital, Baron Ferdinand de Rothschild, spoke in warmly appreciative terms of the gratuitous services of the medical staff. At the close of the meeting subscriptions amounting to nearly £1000 were announced.

PRESENTATIONS.—Mr. Frederick Prince, M.R.C.S., who, for nearly fifty years, has been in practice at Sawston, and for forty-eight years held the medical officership for the Linton Union, has been presented by the gentry and inhabitants of Sawston and adjacent villages, as a mark of respect and esteem on his removing to Bexhill, with a cottage piano, purchased at the cost of about £80, accompanied by a richly illuminated address.—The governors and officers of Her Majesty's Prison, Strangeways, Manchester, anxious to testify their high esteem and regard for Dr. C. H. Braddon upon his retirement, after twenty-three years' service as medical officer of the prison, are about to present him with a handsome tray, bearing an appropriate inscription.

NORTH LONDON HOSPITAL FOR CONSUMPTION.—On Wednesday the usual annual festival dinner was held at the Hôtel Métropole, under the presidency of Mr. Blundell Maple, M.P., the company numbering some 200 gentlemen. The Chairman, in proposing the toast "Prosperity to the North London Hospital for Consumption," remarked upon the great work done by the institution since its foundation in 1860. The charity had no endowment, and was entirely supported by voluntary contributions. A sum of £5000 was required to erect an additional block, which would provide thirty extra beds, thus raising the total to eighty. Subscriptions were announced of upwards of £4000, which it was stated would provide £1500 towards the current expenditure, and £2500 for the enlargement of the building.

CONVALESCENT HOMES FOR TRAINED NURSES.—On the invitation of Lady George Hamilton a drawing-room meeting was held at the Admiralty, Whitehall, on Saturday afternoon, in aid of a scheme for founding a home of rest for trained nurses. H.R.H. Princess Christian presided. It is intended that this proposed home shall be one in the truest sense of the word, and as nurses, with their salaries of £20 to £25 per annum, cannot pay sufficient to make the scheme entirely self-supporting, it is desired to raise a sufficiently large sum, not only to buy and furnish a house, but also to permanently endow it. It is estimated that this will need £15,000. In moving a resolution in support of the object of the meeting, Sir James Paget spoke of the great advance in the knowledge and skill of nurses, a result due to the practical religious spirit of the age, the improved education of women, and the increased desire to make use of knowledge. Nurses now relieved medical men of what was once a very anxious part of their work, yet they had not that opportunity of change and relaxation which the profession enjoyed. He urged that the proposed home of rest was worthy of public support. The Bishop of Ripon and Miss Catherine Wood also pleaded eloquently on behalf of overworked nurses. Mrs. Bedford Fenwick, of 20, Upper Wimpole-street, is the honorary secretary of the movement.

HOSPITAL REFORM.—The committee recently appointed to inquire into the system of hospital administration in Birmingham has begun its work by issuing a series of seventeen questions to the managers of the several medical charities.

THE SANITARY INSTITUTE.—At a meeting of council held on May 14th, Sir Douglas Galton, K.C.B., F.R.S., in the chair, a scheme was adopted for establishing periodical examinations for inspectors of nuisances at various centres throughout England.

ROYAL MEDICAL BENEVOLENT COLLEGE.—The thirty-seventh annual general meeting of the governors of this College was held in the rooms, 37, Soho-square, on Thursday, the 22nd inst., Dr. Holman, the treasurer, presiding. The report of the Council was submitted, and other important business was transacted, of which a fuller report will be given in our next issue.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following Examiners have been elected for the ensuing year:—Anatomy and Surgery: Sir William Stokes, W. Stoker, W. Thornley Stoker, Robert Swan. Physiology, Histology, and Pathology: Charles Coppinger, J. Alfred Scott. Chemistry and Physics: Thomas Donnelly. Midwifery and Gynæcology: R. Purefoy. Ophthalmology: Arthur Benson. Dentistry: D. Corbet, jun., G. Murray, R. Hazleton, H. Gregg Sherlock, W. Stoker, George White. Public Health: Thomas Donnelly, D. Edgar Flinn, Edwin Lapper, J. D. Pratt. Midwifery Diploma: J. Cranny, S. Mason, William Roe. Preliminary Arts: M. Donnelly, J. D. Pratt.

WORKHOUSE INFIRMARY NURSING ASSOCIATION.—The eleventh annual gathering of the Association was held at Queen's Gate Hall recently. A bountiful tea was provided by the kindness of the Hon. Mr. Hardcastle, and in spite of the heavy rain the nurses began to arrive shortly after 7 o'clock. Medals and gratuities were awarded to many of the nurses; but the great feature of the evening was the presentation of an illuminated address to Miss L. Twining, upon the occasion of her leaving town and resigning her seat upon the board of guardians. Mr. Bousfield, in presenting the book in behalf of her many friends and well-wishers, spoke at some length of Miss Twining's career and immense sphere of usefulness, touching in particular upon her part in bringing forward the necessity of trained nursing in workhouse infirmaries. Miss Twining expressed her surprise and gratification in a few well-chosen words, and the parchment, already inscribed with many noted names, was then signed by those of the committee who were present.

COTTAGE HOSPITALS.—*Abingdon:* The annual report for 1889 records the sustained success of this hospital. The balance in hand at the close of the year was £219. The expenditure included a payment of £93 to the corporation in reduction of the mortgage debt.—*Epsom and Ewell:* The continued satisfactory career of this institution is testified by the annual report (the sixteenth) just issued. During the year seventy-six patients were admitted, making a total of 946 in the past sixteen years. A generous response followed the appeal for funds made in the Queen's Jubilee year towards erecting a larger and more permanent building, and in the ensuing month it will be opened by the Duchess of Teck.—*Iver, Langley, and Denham:* The public interest in this institution is shown by the fact that upwards of 170 persons visited it during the past year, and many of the subscribers have paid the expenses of the patients. Sixty patients were admitted, an increase of nine on the previous year. The cash statement shows a balance in hand of about £60.—A new Cottage Hospital is to be opened by Countess Brownlow at Woodhall Spa on the 29th inst.

NORTHERN INFIRMARY, INVERNESS.—The annual report for 1889 shows that the average yearly cost per patient was £24 6s., a slight increase on the previous year. The average daily number of inmates was 54·80, and the average duration of treatment of patients was 29¾ days. From the treasurer's account it appears that after payment of the expenses there was a small surplus. The completion of alterations in the main building had cost upwards of £260. The fever house for the reception of infectious cases had been reopened.

MEDICAL NOTES IN PARLIAMENT.

The Committee on Sweating.

In the House of Commons on Monday, 19th inst., Mr. Graham asked the First Lord of the Treasury if it was the intention of Her Majesty's Government to act upon the suggestions of the Committee on Sweating, or to give facilities for a debate on the report of that Committee.—Mr. W. H. Smith: I must refer the hon. member to the reply I gave on the 8th inst. to the hon. member for Camberwell; and having regard to the wish of the Government to deal with the question of factory legislation, I am unable to promise facilities for a debate on the report of the Sweating Committee.

Spirits for Bond-fide Medical Purposes.

In the Committee on the Customs and Inland Revenue Bill, Dr. Tanner moved that the new tax on spirits should not apply to those used for medical purposes.—The Chancellor of the Exchequer said that whatever the theoretical expediency of the amendment might be it was extremely difficult, if not impossible, to carry out, and in the case of some persons might lead to a great deal of fraud.—On Clause 5 of the Bill Dr. Tanner moved to omit chloroform and collodion from the medicinal spirits mentioned in the clause.—The Chancellor of the Exchequer said he would undertake to inquire into the matter, with a view of seeing what could be done.

Pharmacy Act (Ireland) (1875) Amendment Bill.

On Tuesday, the 20th inst., on the motion of Mr. Johnston, this Bill was read a second time.

Midwives' Registration Bill.

On Wednesday, Mr. H. Pease briefly moved the second reading of this Bill, which he said had been proposed in the interests of the poorer classes of the community.—Sir R. Lethbridge, in seconding, hoped the House would pass the Bill unanimously, and appealed to Dr. Tanner not to oppose the measure. He pointed out that the object of the Bill was to insure that the poor should have the advantage of at least some portion, however slight, of that enlightenment and scientific knowledge which the rich could command. Such a Bill could not be regarded as depreciatory in the least degree of the medical profession—the noblest of all professions. The hon. member opposite might say that midwives were employed in the place of medical men, and that medical men ought always to be engaged in such cases. But this argument involved an absolute impossibility. There were not sufficient medical practitioners in the country to enable every woman in the lower ranks of society to avail herself of the assistance of one in her time of need; but even if there were, it was obvious that the cost involved would place it out of her power to do so. He would therefore again appeal to the hon. member to withdraw his opposition to the Bill, and to the House to assent to its second reading.—Dr. Tanner said he had received representations from medical men stating that the passage of this Bill would deprive them of much legitimate practice which they at present enjoyed.—Sir W. Foster said the Bill was intended to protect life by securing the employment of competent persons. At present the poor incurred great risks from the ignorance of untrained women, especially in reference to the communication of infectious diseases.—Mr. Brunner and Sir G. Hunter supported the Bill.—Mr. Bradlaugh said the Bill interfered too much with the liberty of the subject, and was speaking when the debate stood adjourned.

THE INQUIRY INTO THE METROPOLITAN HOSPITALS.

The Lords Committee on Metropolitan Hospitals met on Monday for the fifth time, when Hugh Woods, M.D. Dub., practitioner in Highgate, gave evidence. He proposed to centralise medical education, and have the hospitals used merely for the purpose of clinical instruction. His opinion was that the number of students enrolled yearly in London only justified the erection of three such educational centres, and it was absurd to suppose that so many small schools could each be staffed with lecturers so well qualified as men who devoted all their time to the work of teaching the students. He stated that there were many low-class dispensaries managed by totally unqualified men without the slightest kind of medical training, but who in a case of difficulty were covered, even to the extent of signing the death certificate, by some physician, who received the profits. A large portion of his evidence was directed against the exclusiveness of the appointments of the medical staff of the various hospitals, and he suggested generally that such appointments should be thrown open to all registered medical men.

Sir Edmund Hay Currie, representative of the London Hospital and late Chairman of the Small-pox Hospital, said he had joined the Metropolitan Free Hospital in order to test a provident scheme in connexion with that institution. He described what he considered were weak points in the management of the out-patient department, and he was of opinion that no person ought to be treated free except in the case of accidents. He proposed that a general hospital, like the London Hospital, should have affiliated to it a number of provident dispensaries, from which cases should be passed on to the hospital as a consultative department. He did not believe that patients in the London Hospital were seen by students only, and thought that such a thing was impossible. It was difficult to say whether the provident dispensary tended to starve the general practitioner, but every charity was abused in London by the class above taking advantage of what was intended for the class below, and at the London Hospital they were becoming alive to that abuse. He thought, in regard to the fever hospitals and Poor-law infirmaries, that it was wrong to have as many as 700 beds under the control of one medical officer. The infirmary officers were first-rate men, but, being human, they wanted looking after. He believed that patients far preferred being treated at hospitals than at dispensaries, which he believed was due to the existence of a number of "rotten" dispensaries, which are not dispensaries at all, but exist only for the purpose of bleeding the poor, who in the end fall back upon the hospital. Continuing his evidence on the question of nursing, he said, in reply to Lord Cathcart, that he had no experience of male nurses except at Scutari during the Crimean War, and he certainly did not

want to find himself in such hands any more. The witness then proceeded to give details of the working of the provident system, and the committee adjourned.

On Thursday, the 22nd inst., the first witness to be examined was Mr. Bruce Clarke, of St. Bartholomew's Hospital. Referring to the out-patient department, he said that there were from 250 to 260 patients seen in an hour, but there were between forty and fifty persons to attend to them, consisting of ten house surgeons and numerous dressers, all working under supervision. Chairman: So that when we hear of about sixty patients being examined in an hour, it by no means signifies that they are seen by one medical man? Witness: Certainly not, so far as St. Bartholomew's is concerned. In his opinion it was practically impossible for students to see patients on their own responsibility. Referring to the class of people applying for assistance at the hospitals, he said no doubt a few might be able to pay for treatment; but there was no system of inquiry by any responsible official. He referred to the mode of admission of patients to the hospital, and stated that practically no patients were sent away from the hospital on the authority of a porter.—By Lord Cadogan: Would you say that any of the best medical men were excluded from the hospital staff by reason of not having a London diploma?—Witness: No, certainly not.—Chairman: In London the London qualification is required. Is that because you think it a higher test?—Witness: Partly for that reason and partly because we think that if a man is educated in London, by a sort of *esprit de corps*, he should be elected. On the subject of the amalgamation of medical schools, he thought it would be a mistake to attempt to amalgamate all the schools, though their number might be reduced with advantage. Lecturers in medical schools should be in practice, in order to know the practical bearings of the subjects taught. He gave it as his opinion that men who devoted their whole time to teaching were more apt to teach the scientific aspect of their subject and neglect what was more practical. He denied that Mr. Nelson Hardy's evidence gave a correct representation of the state of the out-patient department, and in reply to the chairman stated that the meaning conveyed on the surface of his evidence was undoubtedly erroneous as far as St. Bartholomew's Hospital was concerned. In reply to Lord Thring, the witness thought much misconception prevailed on the subject of discipline and moral superintendence of medical students, and explained that at St. Bartholomew's Hospital there was a discipline committee. He thought that the discipline in that hospital was complete, both with respect to in-door and out-door students. The supervision exercised was of a very strict kind. In reply to Lord Cadogan, the witness said he only objected to a Medical University which would be attended by officers entirely outside the hospitals.

Sir Morell Mackenzie was then examined. He stated that he had been a student of the London Hospital, and had had a great deal of experience of its working as a member of its medical staff. He thought that both general and special hospitals were required. General hospitals were required for educational purposes, but special hospitals were also required, although not to the same extent. There was not the same concentration of interest manifested in the treatment of cases in a general hospital as in special hospitals, and on that account the treatment in a general hospital was not carried out with the same success as in special hospitals. Then their organisation for the treatment of special diseases attracted much more special cases, and, although special hospitals required payment, they were numerously attended by patients who had to make these payments. He would like to see that principle adopted in all hospitals, inasmuch as he thought the graduated system of payment according to the means of the patients was advisable. He thought that if a general system of payment existed it would not at all interfere with medical men. Some medical practitioners in the poorer neighbourhoods thought that the system of payments would take away some of their patients from them. That he attributed to ignorance of the working of the system. As a matter of fact, the result of establishing this system of graduated payment in the Golden-square Hospital had reduced the number of patients very considerably, and had acted as a protective to general practitioners. Those hospitals were most necessary which had the most technical modes of examination, such as hospitals for the eye, throat, nervous diseases, and diseases of women and children, which were difficult to carry out in a mixed general hospital. Then there were hospitals like the cancer and chest hospitals, which afforded useful asylums for patients with chronic or long-standing ailments, such as general hospitals disliked very much to take in; and he thought that they did a great deal of good in that way. In special hospitals everything was made secondary to the cure of the patients, whereas in the general hospital the special department was starved for want of proper and special appliances. He would not like to see any restrictions of special hospitals. It was a question of free trade really. He was quite sure that a hospital which did not do good would soon cease to exist. Referring to the origin of these hospitals, he said they were established in a manner similar to the general hospitals, by a number of gentlemen combining and asking their friends for subscriptions. That was the system of the origin of any hospital nowadays. He condemned the out-patient department as being unnecessary to the hospital for teaching purposes. It had frequently been said that they were required for teaching students; but, as a matter of fact, the students were not required to attend this department at all, and in a hospital of 150 students only some five students would be found to be amongst these out-patients during the day. The question of the relative value of medical degrees for hospital appointments was then gone into, when the witness characterised the existing restrictions as an anachronism, going back to the time when the Colleges of Physicians and Surgeons were able to direct the whole of the medical education in London. He gave it as his opinion that some of the best men were excluded by this protective system. In reply to Lord Cadogan, he said that it was within his knowledge that such exclusion did exist. Witness then proceeded to make the suggestion that a great saving could be made if the large general hospitals could be removed out of London altogether and several smaller hospitals instituted throughout the metropolis providing accident wards for urgent cases. It had been pointed out by Sir James Simpson many years ago that that would be a much more healthy condition of affairs. The sale of the ground on which these hospitals were built would give very substantial properties for building such smaller temporary hospitals.

The Committee then adjourned to Monday, June 9th.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on May 20th, 1890.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever	Other diseases.	Total.	
Eastern Hospital	174	25	..	13	..	212	442
North-Western Hospital	94	24	..	4	..	122	415
Western ,,	128	19	..	10	5	162	282
South-Western ,,	162	..	..	..	..	162	350
South-Eastern ,,	169	12	3	23	3	210	462
Northern ,,	312	25	..	7	..	344	584
Totals	1039	105	3	57	8	1212	2515

SMALL-POX.—*Atlas* hospital ship, 4.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BENSON, H. T., L.S.A., has been appointed Medical Officer for the St. Nicholas Second District of the Spalding Union.

BUNCOMBE, WM. DEWEY, L.R.C.P., M.R.C.S., has been appointed Assistant Medical Officer to the Infirmary of the City of London Union, Bow-road, vice Wm. Gem, L.R.C.S.I., L.K.Q.C.P.Irel., & L.M., resigned.

CARGILL, L. V., M.R.C.S., L.R.C.P., L.S.A., has been appointed Ophthalmic Clinical Assistant, King's College Hospital.

FREEMAN, J. P. W., M.D. Durh., M.R.C.S., has been appointed Medical Officer for the Fourth District of the Andover Union.

GREENLEES, THOS. DUNCAN, M.B., C.M. Edin., Assistant Medical Officer to the City of London Lunatic Asylum, has been appointed Medical Superintendent of the Graham's Town Asylum, Cape of Good Hope, vice Robert Hullah, M.D., deceased.

HOPKINS, G. HERBERT, M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer to the Swansea Hospital, vice H. E. Rawlings, resigned.

JOHNSON, P. P., M.B., C.M.Edin., has been appointed Medical Officer for the Seventh District of the Bedminster Union.

KNIGHT, H. E., M.B. Lond., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Stockton-on-Tees Hospital and Dispensary.

LATTEY, A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Banstead District of the Epsom Union.

LEECH, PRIESTLEY, M.B., B.S. Lond. Univ., F.R.C.S. Eng., has been appointed Honorary Medical Officer to the Halifax Infirmary, vice F. E. Macaulay, M.R.C.S., L.S.A., deceased.

LUMSDEN, GEO., M.B., C.M. Glas., has been appointed Medical Officer for the Pateley Bridge Rural District, vice Jardine.

MARTIN, CHRISTOPHER, M.B., C.M. Edin., has been appointed an Honorary Medical Officer at the Birmingham and Midland Hospital for Women.

PAPILLON, T. A., L.R.C.P., L.M. Edin., has been appointed Medical Officer for the Empingham District of the Oakham Union.

RISDON, W. N., M.D., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed Second Medical Officer to the Sun Life Office.

SELBY, P. G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fourth District of the Faversham Union.

SPENCER, WALTER, L.R.C.P. Edin., has been appointed Medical Officer and Public Vaccinator for the District of Gringley-on-the-Hill, of the Retford Union.

TEICHELMANN, E., L.K.Q.C.P. Irel., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Parish of Birmingham.

TOMORY, J. KAY, M.B. Edin., has been appointed Medical Officer to the Parish of New Abbey.

WASHBOURN, J. W., M.D. Lond., has been appointed Assistant Physician to Guy's Hospital.

WHITCOMBE, C. H., F.R.C.S. Edin., has been appointed Medical Officer for the Workhouse of the Sevenoaks Union.

WHITE, W. HALE, M.D. Lond., has been appointed Physician to Guy's Hospital.

WILL, J. C. O., M.D. Aberd., has been appointed Consulting Surgeon to the Royal Infirmary, Aberdeen.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BOROUGH OF BOLTON.—Medical Officer of Health and Public Analyst for the Borough. Salary £400 per annum. (Apply to the Town Clerk, Town Hall, Bolton.)

BRISTOL GENERAL HOSPITAL.—Ophthalmic Surgeon and an Assistant Physician-Accoucheur.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238A, Gray's-inn-road, W.C. House Surgeon for six months. Rooms and board.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's-inn-road.—Three Clinical Assistants. Fee two guineas. Also a Registrar and Anæsthetist. A small honorarium is given.

CHARING-CROSS HOSPITAL, Strand, W.C.—Assistant Physician, Assistant Surgeon-Dentist, and Anæsthetist.

COUNTY ASYLUM, Rainhill, near Liverpool.—Locum Tenens in the Asylum, to take duty for four months during the holiday season. Salary £2 2s. a week, with board, lodging, &c.

CROYDON GENERAL HOSPITAL.—House Surgeon. Salary £100, increasing £10 per annum to £120, with board and residence in the Hospital.

DERBY AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Second Assistant Surgeon. Salary £100 per annum (out-door), with additional fees for Midwifery of 5s. 3d. in each case. The salary to be advanced £10 in six months after appointment, and afterwards £10 per annum until it reaches £250 per annum conditionally. (Apply to the Secretary, 58, Abbey-street, Derby.)

DORSET COUNTY ASYLUM, Dorchester.—Assistant Medical Officer. Salary to commence at £120 a year, with board &c.

EASTERN DISPENSARY, Leman-street, Whitechapel.—Physician. Honorarium of £50 a year given. (Apply to the Secretary, 60, Great Prescot, E.)

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, N.E.—Junior House Surgeon for six months, at a salary of £30.

PARISH OF St. LEONARD, SHOREDITCH.—Resident Assistant Medical Officer for the Workhouse and Infirmary. Salary £100 per annum, increasing £10 annually to £120 per annum, with rations, furnished apartments, and washing in the Infirmary. (Apply to Mr. R. Clay, Clerk's Office, 213, Kingsland-road, N.)

ROYAL FREE HOSPITAL, Gray's-inn-road.—Dental Surgeon. Also an Anæsthetist.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London.—Assistant Physician.

SALFORD ROYAL HOSPITAL.—Honorary Medical Officer for the Pendleton Branch Dispensary.

WALLASEY DISPENSARY.—Junior House Surgeon. Salary £30 per annum, with furnished apartments, coal, gas, and attendance. (Apply to the Hon. Secretary, Elm Mount, Penkett-road, Liscard, Cheshire.)

WEST RIDING ASYLUM, Wakefield.—Two Resident Clinical Assistants.

Births, Marriages, and Deaths.

BIRTHS.

HUMPHREYS.—On May 17th, at Queen's-crescent, N.W., the wife of F. Rowland Humphreys, L.R.C.P. Lond., of a son.

LIPSCOMB.—On May 12th, at Starcross, Devon, the wife of Edgar R. S. Lipscomb, L.R.C.P. Lond., M.R.C.S., L.S.A., of a daughter.

POOLMAN.—On May 19th, at Abergavenny, Mon., the wife of A. E. Poolman, B.A., M.R.C.S. Eng., L.R.C.P., of a son.

PULLIN.—On May 14th, at Weston-super-Mare, the wife of Dr. Pullin, of Flora-place, Plymouth, of a daughter.

WALLACE.—On May 11th, at Saumarez-street, Guernsey, the wife of Alfred C. Wallace, M.R.C.S., L.R.C.P. Lond., of a daughter.

WHITNEY.—On May 13th, at Berkeley-terrace, Ridgway, Wimbledon, the wife of N. Scott Whitney, M.B., F.L.S., of a daughter.

MARRIAGES.

BUTT—AMBLER.—On April 23rd, at Gulzarbagh Church, Patna, Bengal, by the Rev. S. Bruce-Austin, Frank Kernot Butt, L.R.C.P., &c., of Calcutta, only son of Charles Kernot Butt, of Hampton-hill, S.W., to Kathleen Marie, eldest daughter of Charles Ambler, Esq., of Monghyr, Bengal.

PERRY—MCMANUS.—On May 15th, at St. Paul's, New Wandsworth, Edwin Cooper Perry, M.A., M.D., of the College, Guy's Hospital, to Caroline Maud, second daughter of James McManus, Esq., of Killeaden House, county Mayo, Ireland.

DEATHS.

BRAMWELL.—On May 19th, at Barossa-place, Perth, Jas. P. Bramwell, M.D.

COATES.—On May 16th, at Harley Lodge, Torquay, William Coates, M.D., in his 85th year.

FEARNS.—On May 20th, at Hotel Bellevue, Wiesen, Switzerland, Robert Fearns, M.B.

HUGHES.—On May 13th, at Llanberis, Carnarvon, Thomas Hughes, M.D. St. And., M.R.C.S.

JECKS.—On May 16th, at University College Hospital, London, Cyril William Jecks, M.D. Lond., Resident Medical Officer of the Hospital, elder son of William John Jecks, of Hilldrop-road, N., aged 27.

PEARCE.—On May 15th, Walter Pearce, M.D., M.R.C.P. Lond., Physician to St. Mary's Hospital, aged 36.

QUARRY.—On April 14th, at Cannanore, Madras, Surgeon-Major Charles Quarry, Medical Staff, son of the Rev. John Quarry, D.D., of Donoughmore Rectory, co. Cork.

ROCHFORT.—On May 15th, at Southend, Walter Mingay Rochfort, surgeon, of Priory Villas, Newlands Park, Sydenham, of blood poisoning, contracted in the discharge of his professional duties.

SAWYER.—On May 14th, at Cann, Shaftesbury, William Hewley, eldest child of R. H. Sawyer, surgeon, aged 20.

SCOTT.—On May 17th, at his residence, Inverness-terrace, Hyde Park, John Scott, late Principal Inspector-General of Hospitals, Bombay Medical Service, in his 86th year.

WRIGHT.—On May 13th, at 253, Eccles New-road, Manchester, Catharine Elizabeth, the beloved wife of Gaskoin Wright, L.R.C.P. Lond., M.R.C.S. Eng., and daughter of Francis Denton, of Southport, aged 29.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, May 26.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. Wm. Lang: External Diseases of the Eye.

Tuesday, May 27.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same days, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. R. Percy Smith: Delusional Insanity.—Hospital for Diseases of Skin, Blackfriars: 4 P.M., Mr. Jonathan Hutchinson: Pemphigus.

ROYAL INSTITUTION.—3 P.M. Mr. Andrew Lang: The Natural History of Society.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Prof. Humphry: Senile Changes, Hypertrophy and Atrophy of the Skull.—Dr. Robert H. Bakewell: On the Cure of Leprosy.—Sir William Roberts: A Contribution to the Chemistry of Gout.

Wednesday, May 28.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Cecil Biss: Pneumothorax.—Royal London Ophthalmic Hospital: 8 P.M., Mr. Quarry Silcock: Ophthalmoscopic Cases.

BRITISH GYNÆCOLOGICAL SOCIETY.—8 P.M. Dr. A. W. Edis: The Diagnosis and Treatment of Obscure Cases of Metrorrhagia.

Thursday, May 29.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

LONDON POST-GRADUATE COURSE.—National Hospital for the Paralysed and Epileptic: 2 P.M., Mr. V. Horsley: Surgery of the Brain and Spinal Cord.—New Infirmary, Paddington: 4 P.M., Mr. Hutchinson: Clinical Lecture on Surgical Cases. 5 P.M., Dr. Savill: Post-mortem Examinations.

ROYAL INSTITUTION.—3 P.M. Prof. Dewar: Flame and Explosives.

ST. PETER'S HOSPITAL FOR STONE, &c.—4 P.M. Mr. E. Hurry Fenwick: Electric Cystoscopic Study of Urinary Tuberculosis.

ZOOLOGICAL SOCIETY OF LONDON (Lecture Room, Society's Gardens, Regent's-park).—5.30 P.M. Mr. F. E. Beddard: The Colours of Animals. (Davis Lecture.)

Friday, May 30.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Clinical Demonstration.—Hospital for Sick Children, Gt. Ormond-st.: 2 P.M., Mr. B. Pitts: Demonstration on Selected Cases from Surgical Out-patient Department.—Hospital for Consumption, Brompton: 4 P.M., Dr. Cecil Biss: Chronic Pneumonia and its Results.

LONDON HOSPITAL MEDICAL COLLEGE.—4 P.M. Mr. Jonathan Hutchinson: Stone in the Bladder.

ROYAL INSTITUTION.—9 P.M. Mr. A. A. Common: Astronomical Telescopes.

Saturday, May 31.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

ROYAL INSTITUTION.—3 P.M. Rev. S. Baring-Gould: The Ballad Music of the West of England. (With Musical Illustrations.)

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 22nd, 1890.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 16	29·94	S.E.	59	52	114	64	49	·08	Hazy
,, 17	29·68	S.W.	56	52	114	65	52	·01	Cloudy
,, 18	29·76	S.W.	58	52	114	68	51	·03	Cloudy
,, 19	29·75	E.	60	55	108	70	51	·08	Hazy
,, 20	29·69	S.	55	51	94	61	50	·01	Cloudy
,, 21	30·13	S.W.	57	53	121	70	50	..	Cloudy
,, 22	30·33	E.	59	52	95	67	51	..	Hazy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

"SIX YEARS IN BED.—AN APPEAL."

MR. HUTCHINSON wishes to acknowledge the receipt of the following contributions in aid of Dr. C——.

J. T.	£5	5	0	Dr. Sedgwick (Yorks) ..	£2	2	0
D. H. Fowler, Esq. (Cirencester)	3	3	0	Dr. E. A. Snell (City-road)	1	1	0
Dr. Churchill (Chesham, Bucks) (corrected from last week)	2	10	0	H. Stear, Esq. (Saffron Walden)	1	1	0
W. G. Burnie, Esq. (Bradford)	2	2	0	Sympathy	1	1	0
				W. L. Chubb, Esq. (Sandgate)	1	0	0
				A. W. W.	0	10	6

Mr. J. Bell.—We know of no work which would quite meet our correspondent's requirements. Much information, however, on domestic sanitary matters, construction of dwellings, may be gained from a book entitled "Our Homes," edited by Mr. Shirley Murphy, and published by Cassell and Co.

Dr. F. P. Atkinson (Surbiton) is referred to an annotation in another column.

E. J. should consult his ordinary medical attendant.

THE SOCIETY OF APOTHECARIES.

To the Editors of THE LANCET.

SIRS,—It is very pleasing to learn, by Mr. Upton's letter, the decision of the Court of Assistants of the Society of Apothecaries, more especially as I was the one to advocate such a step in a letter you kindly inserted early in the Jubilee Year. There is one special point I wish to draw attention to—namely, that if there is to be any difference at all made in the fee paid, it should be in favour of the licentiates, and not the examiners, who are paid servants of the Society.

I am, Sirs, yours faithfully,

Herne Hill, May 17th, 1890. C. SWABY-SMITH.

THE MORTALITY OF INFANTS IN GERMANY.

AT a meeting of the Society for Public Hygiene on the 28th ult., Dr. Rahts of the Imperial Office of Health spoke on the causes of infant mortality. He said that the death-rate of infants is higher in Germany than in any other civilised country, and attributed the fact to unsuitable milk, illegitimacy, the employment of women in factories, and the want of attention to this matter on the part of the governmental and municipal authorities.

Suburban.—There must be a limit of time. Beyond the six months it does not seem reasonable for B to expect A to attend cases. Within that limit A should have agreed to do so, as we understand the contract.

E. K. F.—Ellis's plates.

MUSHROOM POISONING.

THIS is a lamentably common occurrence in Italy, where the Hygienic Code, which is working so well in other respects, has as yet made no perceptible reduction in the mortality from mushroom poisoning. The following tragedy is but a sample of what Italian journals have frequent occasion to record. In the vicinity of Pisa a family of peasants—consisting of father, mother, and four children—made their dinner off mushrooms gathered in a neighbouring meadow. On the day after they all complained of severe colic and general malaise; but, under the impression that the symptoms would pass off, they did not call in the doctor. The pains and sickness continuing, they at last sent for him; but before he came two of the children had died, the father was moribund, and now it is a question whether the mother and the other two children (infants) can be saved. Rural dispensaries in Italy have always on hand a supply of antidotes to poisonous mushrooms; but these are seldom available in time, and such deplorable "accidents" as that noticed above will continue to recur till the Italian peasant is taught to distinguish between the edible and the non-edible of the fungi which enter so largely into his dietary.

Trebly Qualified might apply for information to the Secretary of the Brussels Medical Graduates' Association, Dr. Steele, 1, Florence-terrace, Ealing, W.

Mr. G. E. Jeafreson.—Judging from the context, the insertion of the word referred to was regarded as a slip of the pen.

THE DANAHER FUND.

To the Editors of THE LANCET.

SIRS,—As treasurer of the above fund, I should be obliged if you would insert the following list of subscriptions received to date, and allow me to briefly recapitulate the points of the case:—Husband paralysed, mind and body, and utterly helpless for over a year past; wife partially paralysed since the birth of her youngest child, and unable to earn anything, and four children requiring support. I earnestly beg for further contributions from the profession towards this very necessitous case.

I am, Sirs, yours faithfully,

May 21st, 1889. EDWARD EAST.

W. Morrant Baker, Esq. ..	£2	2	0	Arthur G. Wood, Esq. ..	£1	1	0
John Croft, Esq.	2	2	0	K. (11, Crescent, Taunton)	1	0	0
A. Darlow, Esq.	2	2	0	Mr. Sinclair	0	15	0
N. Davies-Colley, Esq. ..	1	1	0				

Mr. Hutchinson also wishes to acknowledge the receipt of the following contributions in aid of Mr. Danaher:—J. T., £5 5s.; Dr. Churchill (corrected from last week), £2 10s.; H. Stear, Esq. (Saffron Walden), £2 2s.

INFIRMARY VACANCY IN HALIFAX.

OUR opinion is asked of the propriety of sending a circular with testimonials to all the governors by a candidate for the vacancy, though the election rested with a committee. We think it would have been better to have sent the circular and testimonials only to the gentlemen responsible for the election.

Doubtful.—It is especially enacted, under the Act of 1890, that where a reception order has been made it is only a justice of the peace who can make an order for the reception and detention of a lunatic in a workhouse, and the relieving officer has no authority to give any such order, for however short a time. The duty of the relieving officer is to remove the lunatic forthwith to the asylum. If he cannot do so, he must obtain an order from the justice of the peace for the admission of the insane person to a workhouse and detention therein, which would be valid for fourteen days. Should the justice of the peace make such an order, the workhouse medical officer would have to certify as to injuries &c. on entering and on leaving.

E. Strickland Power.—The London School of Medicine for Women is in Handel-street, Brunswick-square, W.C.

MONTHLY RHYTHM IN MALES.

To the Editors of THE LANCET.

SIRS,—The possibility of men undergoing a monthly rhythm similar to that which women undergo is worth considering. I suggest the following as a provisional hypothesis: Both sexes of the human species pass through a monthly rhythm, which begins in the embryo, and continues till death. There is no need to state here the grounds on which I have framed this hypothesis. That a monthly rhythm occurs in woman independently of so-called menstruation is manifest; for such a rhythm is easily detected during pregnancy and lactation, and after the climacteric. But does any similar rhythm occur in the male sex, or in girls before puberty?

I am anxious to obtain information bearing upon this question, and venture to ask if any of your readers will give me the advantage of their experience. I may remark that a careful study of the periodicities of disease, notably of periodical neuroses and hæmorrhages, seems to me most likely to throw light on the question.

I am, Sirs, faithfully yours,

Guilford-street, W.C., May 19th, 1890. HARRY CAMPBELL, M.D.

EGYPT.

DR. HIRSCHBERG, one of the most highly reputed of the German ophthalmologists, has published a little book of 116 pages on Egypt. It contains three essays, entitled "Egypt as a Climatic Health Resort," "The Ophthalmology of the Ancient Egyptians," and "The Egyptian Eye Disease." The writer spent six weeks in Egypt. His medical remarks on ancient records, including those of Herodotus, throw quite a new light on them. As a residence for consumptive patients, Hirschberg gives Upper Egypt the palm, then Tunis, then Sicily, then the Gulf of Naples, then Corfu, and then the Riviera.

Mr. Piggott is entitled to an explanation, which, we trust, by this time he has received.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Lewers, London; Dr. Cullingworth; Mr. Jessett, London; Dr. Angel Money, London; Sir G. Young, London; Mr. Scudamore, London; Mr. F. Marsh, Birmingham; Sir J. Sawyer, Birmingham; Dr. Gowers, London; Dr. Lionel Beale, London; Dr. Snow, London; Mr. Mayo Robson, Leeds; Mr. W. R. H. Stewart, London; Dr. Malins, Birmingham; Mr. E. East, London; Dr. Glaister, Glasgow; Dr. J. Harris, London; Dr. F. Little; Dr. Mott; Mr. G. W. Johnston, Penshau; Mr. Miles, Stantonbury; Mr. C. Arrol, Sheerness; Mr. R. W. Murray, Liverpool; Dr. Shearer, Liverpool; Mr. Meadows, Hastings; Dr. R. Broom, Glasgow; Mr. Kühn; Mr. Dickinson, London; Mr. Tiplady, Shapinshay; Dr. Gale; Dr. Starling; Mr. Mosely; Mr. J. L. Somers, Roscrea; Dr. G. G. Maclaren, Brindisi; Mr. J. R. Williams, Victoria, B.C.; Dr. H. Campbell, London; Mr. G. C. Wilkin, London; Dr. O. Coleman, Surbiton; Mr. H. J. Buck, London; Miss Moore, Harrogate; Dr. Edw. Thompson; Mr. Khan, Leipsic; Messrs. Anderson and Co., London; Mr. C. A. Ballance, London; Messrs. Hewlett and Son, London; Mr. Watt, Hovingham; Mr. Fuge, Taunton; Dr. Hale White, London; Dr. Rentoul, Liverpool; Mr. H. Green; Mr. D'Arcy Power, London; Mr. Hill, London; Dr. Mapother; Messrs. Evans and Wormull, London; Mr. Brown, Edinburgh; Dr. Hassall, San Remo; Dr. Russell, Paisley; Mr. Ramsden, Yorks; Mr. Kirby, Ben Rhydding; Mr. Barnett, London; Mr. Grant, London; Messrs. Lee and Martin, Birmingham; Mr. Nicholls, Fulbourne; Messrs. E. and S. Livingstone, Edinburgh; Mr. Matthews, Stawell; Mr. Shekleton, Bristol; Mr. Lewis, Wakefield; Mr. Johnson, Halifax; Dr. Moore, Godalming; Mr. Ford, Devonport; Mr. Mackay, Glasgow; Mr. Hyde, London; Miss Calvert, Monsall; Mr. Johnson, Cambs; Dr. Montreal, Montreal; Mr. Frowde, London; Mr. Frost, London; Mr. Huish, London; Dr. Croke, Hull; Mr. Oxley, Wisbech; Dr. G. B. Barron, Southport; Mr. E. P. Watkins, Nottingham; Mr. C. F. Williamson, Horley; Mr. J. M. Rees, London; Dr. Dean, London; Dr. J. S. Bury, Manchester; Mr. A. C. Davis, London; Dr. Roche; Mr. J. P. Aston, Bradford; Mr. F. J. Allan, London; Dr. Kelly, London; Dr. C. H. Taylor, Derby; Dr. P. S. Abraham, London; Mr. P. S. Hutchinson, London; Mr. Bullivant, Derby; Mr. Gerrand, London; Messrs. Eason and Son, Dublin; Mrs. Davies-Gilbert, Truro; Messrs. Mottershead and Co., Manchester; Mr. Brett, Bridlington; Mr. Kelvington, West Hartlepool; Messrs. Snell, London; Mr. Sell, London; Mr. Freeman, Soho-square; Mr. Hornibrook; Mr. Arrowsmith, Bristol; Mr. J. Stewart, Clifton; Mr. Marriott, London; Secretary, Royal Albert Hospital, Devonport; Physician, London; Nota, London; St. Bede Chemical Co., Newcastle-on-Tyne; Medical Superintendent, County Asylum, Rainhill; Statim, London; Matron, Ampthill; Pulsometer Engineering Co., London; Medical Superintendent, Dorset County Asylum; M.D., London; Selby, London; Secretary, College of State Medicine, Bloomsbury; M.D., Lincoln's-inn; Secretary, Royal Free Hospital, London; Cardamom, London; Secretary, Central London Throat and Ear Hospital; Secretary, Royal Hospital, Salford; Sanitas Co., Bethnal-green; Dahl's Agency, London; Secretary, Hospital for Women, Jessop; Doubtful; Justice.

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NEWSPAPERS.—*The Diamond Fields Advertiser (Kimberley), Hastings and St. Leonards Evening Journal, Leeds Mercury, Liverpool Daily Post, Cambridge Chronicle, New York Herald (London), City Press, Bristol Mercury, Bradford Observer Budget, Reading Mercury, Mining Journal, Local Government Chronicle, Naval and Military Argus, Weekly Free Press and Aberdeen Herald, Kilkenny Journal, Nursing Record, Sunday Times, Sheffield Daily Telegraph, Metropolitan, Liverpool Courier, Surrey Advertiser, Builder, Windsor and Eton Express, Broad Arrow, Hertfordshire Mercury, Temperance Record, Architect, West Middlesex Standard, Richmond Times, Spectator, Manchester Guardian, Army and Navy Gazette, Notts Express, Sussex Daily News, Law Journal, Political World, Weekly Times and Echo, Observer, Personal Rights Journal, Inquirer, The World, Birmingham Gazette, Oldham Standard, York Evening Press, Football Echo, Birmingham Daily Post, Sales and Wants Advertiser, Liverpool Mercury, Dundee Courier, South Birmingham News, Cambrian News, &c.*, have been received.

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